

Policy Department External Policies

EURO-INTEROPERABILITY: THE EFFECTIVE MILITARY INTEROPERABILITY OF EUROPEAN ARMED FORCES

SECURITY AND DEFENCE

November 2007

EN

This study was requested by the European Parliament's Subcommittee on Security and Defence.

This study is published in the following language: English

Authors: **Yves Boyer and Julian Lindley-French**

This study was written by **Dr Yves Boyer**, Chairman of SFEM (Société Française d'Etude Militaire), associate professor at Ecole polytechnique, at Institut d'Etudes Politiques de Paris and at Ecole Spéciale Militaire de Saint-Cyr, and Deputy Director of FRS (Fondation pour la Recherche Stratégique) in Paris; and **Professor Julian S. Lindley-French**, Professor of Military Operational Science, Netherlands Defence Academy & Senior Associate Fellow, United Kingdom Defence Academy.

Study carried out within the framework agreement between **ISIS Europe** and the European Parliament

Responsible Official: **Dr Gerrard Quille**
Directorate-General for External Policies of the Union
Policy Department
BD4 06M081
rue Wiertz
B-1047 Brussels
E-mail: gerrard.quille@europarl.europa.eu

Publisher European Parliament

Manuscript completed on 19 November 2007.

The study is available on the Internet at
<http://www.europarl.europa.eu/activities/expert/eStudies.do?languageEN>

If you are unable to download the information you require, please request a paper copy by e-mail : xp-poldep@europarl.europa.eu

Brussels: European Parliament, 2007.

Any opinions expressed in this document are the sole responsibility of the author and do not necessarily represent the official position of the European Parliament.

© European Communities, 2007.

Reproduction and translation, except for commercial purposes, are authorised, provided the source is acknowledged and provided the publisher is given prior notice and supplied with a copy of the publication.

Executive Summary

The rate of deterioration in the global security situation is such that Europeans will need to develop a distinctive approach to European military interoperability if they are to generate adequate value-for-money military effect. The objective of this study is to consider the future of European military interoperability within the context of complex inter-agency operations, which is at the heart of both EU and NATO planning.

NATO will remain an essential military-security hub and thus a conduit to US military leadership of advanced expeditionary coalitions the world over. However, such is the gap between US military technologies, doctrine and thus interoperability that the need for a truly complementary European military security hub based on a 'European Force Modernisation Concept' is pressing.

Nevertheless, given the emerging disparities in defence expenditure and experience between European countries, a gap is opening up that could profoundly undermine European military interoperability and thus prevent the fulfilment of the full range of the Petersberg Tasks.

In spite of the many years of working together within the NATO framework and emerging shared experience under the EU flag, it is evident that European forces are far from creating a seamless military architecture able to generate efficiently military effect at a price and level of risk acceptable to European leaders and peoples. On the contrary, given the contending levels of defence expenditure, military cultures and operational structures, there is a very real danger that Europe will witness the re-nationalisation of the armed effort over the next period. Such a re-nationalisation would represent an error of historic proportions.

The focus of this study, therefore, necessarily concerns how best to generate greater effect from Europe's armed forces within the context of EU operations, given the need for autonomous operations that are likely to be progressively more robust. It considers how best to facilitate and promote effective and efficient combined and joint European operations through effective European military interoperability.

The study necessarily examines several levels of analysis. While the focus is on practical military interoperability, some aspects of the political debate over European defence are also addressed because the state of both NATO and ESDP are central to the question of interoperability. Indeed, whilst it is self-evident that the highest level of interoperability would be achieved through genuine defence integration such a leap of political faith is unlikely to take place in all but the most marginal of areas of defence co-operation for the foreseeable future.

The question remains how states with very different strategic visions, cultures and traditions can undertake the necessary harmonisation of effort to converge on effective military interoperability. This is a dilemma compounded by the growing gap in defence investment between EU member states and the rendering less likely of truly synergistic and effective military interoperability.

Structure

Following the Introduction, the report is divided into six chapters:

- **Chapter One** examines the nature and scope of the concept of interoperability and to what extent it has now moved away from the specific domain of equipment standardization.
- **Chapter Two** looks at the ways and means by which European armed forces (air, naval and ground forces) aim to work efficiently together and the constraints that prevent 'inter-operation'.
- **Chapter Three** considers the modalities and methods according to which those forces should proceed to promote stronger interoperability to how best to guarantee the future effectiveness of future European military structures.
- **Chapter Four** presents an interoperability case study based on a visit by one of the authors (Julian Lindley-French) to Afghanistan.
- **Chapter Five** discusses the technical convergences and capabilities that will have to be developed between European armed forces in order to give each of them the same common/standard ability to support collective European military goals within the framework of the ESDP.
- **Chapter Six** puts forward some specific recommendations aimed at enhancing interoperability between the armed forces of EU member states and the role the EU institutions might play in supporting such an approach.

Findings

Given current planning and thinking it is apparent that at the very least European military interoperability architecture would require several components:

- A European network enabling capability that could lead to a network centric concept that permits compatible, if not integrated, European forces to 'plug and play', particularly at the level of C4ISR.
- Basic legal questions over the use of force and national caveats will also need to be resolved before a European force and operational planning culture and doctrinal concept could be established to underpin effective military interoperability. Such architecture will take time to establish, involving at least one force planning cycle of 10-15 years as European forces converge around a relatively compatible force concept.
- Special Forces would be needed as part of European advanced expeditionary coalition warfare involving coalition forces able to establish a presence. Thus, effective European military interoperability could make virtue out of necessity by developing a capability at several tiers of military effect.

From an interoperability viewpoint permanent structured co-operation must be based on the following components:

- *Adapting NATO Interoperability:* The EU needs to examine NATO interoperability and to consider to what extent it needs to be modified.

- *Establishing an EU Interoperability Concept:* In light of the differences between NATO and the EU in their respective approaches to security, it is useful to retain some level of autonomous institutional architecture.
- *Elaborating Interoperability Benchmarks:* This will require a return to basics in order to promote convergence between the Headline Goal and the NATO Prague Capability Commitment (PCC) processes.
- *Establishing a Common European Security Role:* If new benchmarks are to have any traction Europeans are going to have to properly address the creation of a common European security role.
- *Harmonising the Extent and Scope of Defence and Security Investment:* Investment plans must converge to ensure planning and operational interoperability.
- *Creating a European Military Interoperability Culture:* Adaptations will need to be made to military interoperability to embrace non-military actors vital to mission success within European security interoperability.
- *Creating a new Planning Continuum:* If task-sharing, force specialisation and ‘nicheing’ are to lead to a more cost-effective approach to interoperability the smaller EU member states must consider some form of defence integration.
- *Consider Current Force Packaging:* Task Forces (5,000 strong) would certainly help accelerate more efficient European military interoperability as they would force an expansion of common planning, doctrine and interoperability cultures and approaches.

Conclusion

The study concludes with five main reasons why effective military interoperability between and amongst European forces will be vital if strategic effect is to be generated from European resources:

- First, the nature and scope of change and insecurity will thrust global responsibilities on Europe. Such challenges will require both military capabilities and capacity well beyond the scope of any single European state.
- Second, the US could retrench after the experiences of Iraq and Afghanistan and Europeans must be credible security actors at least in and around Europe at all levels of civil and military effect. Thus, fulfilling the full range of Petersberg Tasks is vital.
- Third, US force planning is: a) of an order of magnitude more advanced and complex than any European; and b) reliant (over-reliant to some Europeans) upon technology to such an extent that a doctrine gap is opening up across the Atlantic.
- Fourth, the balance between civil and military assets will require complex management through the EU and effective civil-military interoperability, particularly at the operational level will be extremely important. Equally, the preparation and implementation of campaign plans will itself demand a new approach to interoperability given the lines of civilian operations essential to mission success.
- Finally, the flag one puts on operation will be almost as important as capabilities. A strategic ESDP will buy Europeans political options when faced with the need to tackle complex contingencies. However, the force must be credible and at the very minimum *modus operandi* and standard operating procedures of headquarters must be harmonised as a matter of urgency.

The bottom line is this: the *status quo ante* of European military interoperability is not an option. Either Europeans together increase investment in new force and operational concepts,

technological force enablers and multipliers, advanced weapons, new doctrine, organisation and training to buy into the US ‘way of war’ or they collectively design a European ‘way of war’ that is relevant to the security challenges of the twenty-first century.

Failure to do either will afford the world the most obvious bell-weather of a loss of political will and security intent on the part of Europeans that will end once and for all any pretensions Europe may have to play a serious security role through the EU.

Role of the European Parliament

It is now widely recognized that the European Parliament has a right to be informed and consulted about matters relating to European Foreign and Security Policy. This would appear to be an opportune time for the interoperability of European armed forces to be raised as a serious issue for further discussion. The Foreign Affairs Committee and its Security and Defence Subcommittee have already acknowledged the importance of interoperability in their previous hearings and reports, e.g. in its report on the implementation of the European Security Strategy in the context of the ESDP, it stressed:

*“the "strategic autonomy" inherent in the ESS, namely the ability to carry out operations within its scope independently of other actors, which requires interoperability and a more sustainable and reliable supply chain based on mutual support and assistance, avoiding duplication and suboptimal use of scarce resources at European level or between Member States...”*¹

The same report also made the following observation:

*“...in multinational operations, the use of different – and often incompatible – equipment and armaments by the participating units leads to extra costs and reduced efficiency; therefore considers that the EU should promote measures to harmonise equipment and armaments with a view to optimising resources and the effectiveness of multinational operations.”*²

It is important that these prescient observations are now further developed in a wider European discussion within national parliaments as well as the European Parliament. With French President Sarkozy indicating that defence will be a major priority of his country’s Presidency of the EU in the latter half of 2008, and in the context of the development of a possible European Defence White paper, there is no better time to deepen this debate. The authors offer this study as a contribution to that dialogue.

¹ The implementation of the European Security Strategy in the context of the ESDP Committee on Foreign Affairs, PE 372.113, European Parliament resolution on the implementation of the European Security Strategy in the context of the ESDP (2006/2033(INI), Rapporteur Karl von Wogau, para. 13.

² Ibid. para. 32.

List of Contents

	Page
Introduction	1
Chapter One:	
1. The Nature and Scope of the Concept of Interoperability	4
1.1 The Components of Broad Interoperability	6
1.2 The Role of Operational Net Assessments in Rapid Decisive Operations	7
1.3 Taking the MIC: A Few Good Actors	11
Chapter Two:	
2. NATO and European Military Interoperability	15
2.1 The NRF Saga	16
2.2 The Capability-Capacity Crunch	18
Chapter Three:	
3. The Current Interoperability Debate	23
3.1 The EU Audit Trail	27
Chapter Four:	
4. The Afghanistan Case Study	28
Chapter Five:	
5. Technical Convergence and Capability Required	31
5.1 European Transformation	32
5.2 New Approaches to Military Co-operation	36
5.3 Organising the European Defence and Technological Industrial Base	37
Chapter Six:	
6. Effective European Military Interoperability	39
6.1 Permanent Structured Co-operation: Re-kindling the Spirit of St Malo	40
6.2 The Effective Military Interoperability of European Armed Forces	42
6.3 Role of the European Parliament	43

Glossary

ACT	Allied Command Transformation
AJP	Allied Joint Publications
ANA	Afghan National Army
ANP	Afghan National Police
ARRC	Allied Command Europe Rapid Reaction Corps
BG	Battlegroup
CA	Comprehensive Approach
CAR	Central African Republic
CFBLNet	Combined Federal Battle Lab Net
CCDP	Comprehensive Capabilities Development Programme
C4ISR	Command, Control, Communications, Computers, Intelligence, Surveillance & Reconnaissance
CJTF	Combined Joint Task Force
COIN	Counter-Insurgency
COM ISAF	Officer Commanding, International Security Assistance Force
CONOPS	Concept of Operations
CPCO	Centre de Planification et de Conduite des Opérations
CWAN	Combined Wide Area Network
DPP	Defence Planning Process
DRC	Democratic Republic of Congo
DSACEUR	Deputy Supreme Allied Commander, Europe
EAG	European Air Group
EBAO	Effects-Based Approach to Operations
EBO	Effects-Based Operations
EDA	European Defence Agency
EDC	European Defence Community
ERRF	European Rapid Reaction Force
ESDC	European Security and Defence College
ESDP	European Security and Defence Policy
ESS	European Security Strategy
EU	European Union
EUCOM	European Command (US)
EUISS	EU Institute for Security Studies
EUMS	EU Military Staff
EUOHQ	EU Operational Headquarters
EUPJHQ	EU Permanent Joint Headquarters
EUPM	EU Police Mission
FOC	Full Operating Capability
4GW	Fourth Generation Warfare
FSO	Full Spectrum Operations
GDP	Gross Domestic Product
GMES	Global Monitoring for Environmental Security
HG	Headline Goal
HQ	Headquarters
HRF	High Readiness Force
IEPG	Independent European Programme Group
IISS	International Institute for Strategic Studies
IME	International Military English

ISAF	International Security Assistance Force
ISR	Intelligence, Surveillance & Reconnaissance
KFOR	Kosovo Force
KMTC	Kabul Military Training Centre
QDR	Quadrennial Defence Review
LTV	Long-Term Vision
MIC	Military Interoperability Council
MILEX	(EU) Military Exercise
MIWG	Multinational Interoperability Working Group
NATO	North Atlantic Treaty Organisation
NEC	Network Enabled Capability
NCO	Non-Commissioned Officer
NCW	Network Centric Warfare
NGO	Non-Governmental Organisation
NRF	NATO Response Force
NSO	NATO Standardisation Organisation
O&M	Operation & Maintenance
OEF	Operation Enduring Freedom
OHQ	Operational Headquarters
OMLT	Operational, Liaison & Mentoring Team
PCC	Prague Capability Commitment
PJHQ	Permanent Joint Headquarters
PKO	Peacekeeping Operation
PME	Principal Military Experts
PP30	Plan Prospectif à 30 ans
POMLT	Police Operational, Liaison & Mentoring Team
PRT	Provincial Reconstruction Team
PSC	Political & Security Committee
PSO	Peace Support Operation
RC South	Regional Command South
RDO	Rapid Decisive Operation
R&D	Research & Development
R&T	Research & Technology
RoE	Rules of Engagement
SACT	Supreme Allied Commander, Transformation
SFOR	Stabilisation Force
SHAPE	Supreme Headquarters Allied Powers Europe
SHIRBRIG	Multinational Standby High Readiness Brigade
SIGINT	Signals Intelligence
SIOP	Single Integrated Operational Plan
SOP	Standard Operating Procedure
SSR	Security Sector Reform
STANAG	Standardisation Agreement
UK	United Kingdom
UN	United Nations
UNSC	UN Security Council
US	United States
WEU	Western European Union
WMD	Weapons of Mass Destruction

Introduction

In describing the requirements for Battlegroups, the EU's Headline Goal 2010 states that

*"...to qualify as an EU Battlegroup, force packages will meet commonly defined and agreed, detailed military capability standards. These overarching standards and criteria concern: availability, employability and deployability, readiness, flexibility, connectivity, sustainability, survivability, medical force protection and interoperability."*³

Headline Goal 2010 also states that,

*"The ability for the EU to deploy force packages at high readiness as a response to a crisis either as a stand-alone force or as part of a larger operation enabling follow-on phases, is a key element of the 2010 Headline Goal. These minimum force packages must be militarily effective, credible and coherent and should be broadly based on the Battlegroups concept."*⁴

Both the objective and requirements implicit in Headline Goal 2010 are thus ambitious and rely to a very great extent on effective European military interoperability.

The objective of this report is to consider the future of European military interoperability within the context of complex inter-agency operations, which is at the heart of both EU and NATO planning. Almost all NATO allies and EU partners are engaged in such operations, ranging from Iraq to Lebanon and Afghanistan. Moreover, with a UN-EU mission to Darfur, Chad and the Central African Republic (CAR), it is likely that Africa will become a focus for the planning and deployment of Europe's armed forces. However, in spite of the many years of working together within the NATO framework and emerging shared experience under the EU flag, it is evident that European forces are far from creating a seamless military architecture able to generate efficiently military effect at a price and level of risk acceptable to European leaders and peoples. On the contrary, given the contending levels of defence expenditure, military cultures and operational structures, there is a very real danger that Europe will witness the re-nationalisation of the armed effort over the next period.

Such a re-nationalisation would represent an error of historic proportions. Not only is Europe finally on the verge of casting off the last tattered vestiges of both World War Two and the Cold War, the world into which Europeans are moving will require a Europe able and willing to act strategically – be it in the civil and/or military realms. The latter years of the first decade of the twenty-first century will doubtless come to be seen as a strategic tipping point. With the best will in the world, and with the average defence expenditure across the twenty-six members of the European Union (EU) at an historic low of less than two per cent, no amount of efficient interoperability will close the gap between what European armed forces will be called upon to do and that which they can actually carry out⁵. The tensions are all too evident in places such as Iraq and Afghanistan where endeavouring to follow US grand strategy on European resources has led Europeans into Europe's first twenty-first century military crisis: a crisis reinforced by Europe's own incompetence in generating the EU Force (EUFOR) for deployment to Chad in support of the humanitarian mission in Darfur. Indeed,

³ See 'The EU Battlegroups: reply to the annual report of the Council', Document A/1964, Assembly of the Western European Union. Interparliamentary European Security and Defence Assembly, 5 June, 2007, p.3

⁴ Ibid., p.5.

⁵ All military expenditures and calculations are based upon IISS – The Military Balance 2007 (IISS, London).

such have been the restrictions placed on the rules of engagement that it is questionable that the force will enjoy any real role or credibility.

The focus of this report, therefore, necessarily concerns how best to generate greater effect from Europe's armed forces within the context of EU operations, given the need for autonomous operations that are likely to be progressively more robust. Consequently, whilst this undertaking focuses on the essential synergies required for trans-national interoperability it must necessarily also consider how best to close the gap between the strategic environment into which Europe is moving and the likely forces and resources available to European defence. Consequently, the report posits a series of strategic judgements based on the premise that interoperability cannot be measured in a truly scientific manner because much of it depends on 'soft' factors, such as planning and command culture, doctrine and training.

This is a conundrum reinforced by the traditional definition of interoperability as being the ability of systems, units or forces to provide and accept services from other systems, units or forces and to use the services so exchanged to enable them to operate effectively together. Put simply, truly effective and synergistic European military interoperability would demand that all European forces agree the same objective, see the same enemy, and act in the same way, which helps to explain why the 2003 European Security Strategy was so vague on the matter of military strategy. Moreover, such interoperability would also require that the measuring/metric of performance and practice is based on the same set of criteria. In spite of the endless talk of 'jointness', it is evident that most national forces find it hard to be truly joint, let alone develop a level of interoperability at the trans-national level (combinedness) that is worthy of the name.

The Aim, Focus and Structure of the Report

The aim of the report is, therefore, to consider how best to facilitate and promote effective and efficient combined and joint European operations through effective European military interoperability. Equally, given the centrality to planning of what has variously become known as the Effects-Based Approach to Operations (EBAO), Comprehensive Planning and Action (CPA), Full Spectrum Operations (FSO) or simply the Comprehensive Approach, the report considers interoperability with non-military actors vital to mission success during complex contingencies.

To that end the report necessarily examines several levels of analysis. Whilst the focus is on practical military interoperability, some aspects of the political debate over European defence must also be addressed because the state of both NATO and ESDP are central to the question of interoperability. Indeed, whilst it is self-evident that the highest level of interoperability would be achieved through genuine defence integration such a leap of political faith is unlikely to take place in all but the most marginal of areas of defence co-operation for the foreseeable future. In other words, intense co-operation is the likely future but the question remains how states with very different strategic visions, cultures and traditions can undertake the necessary harmonisation of effort to converge on effective military interoperability. This is a dilemma compounded by the growing gap in defence investment between EU member states and the rendering less likely of truly synergistic and effective military interoperability.

Whilst the current debate is occasionally far too apocalyptic it is reasonable to assume that a retreat from the vision implicit in the EU's Headline Goal 2010 would witness the downgrading of the European military effort to a level of co-operability, whereby forces are developed at the national level - by and large - irrespective of the planning taking place in

other member states. It is a problem apparent in NATO, as the gap between the capabilities of US forces and those of all Europeans widens. This transatlantic gap begs an important point. When will the gap become such that Euro-Atlantic cohesion will only be possible if Europeans themselves move to create a military hub that is founded on the principle of the generation of greatest military effect at the lowest level of cost to European society – both in terms of treasure and lives? Sadly, Europe is far from effectively pursuing the fruits of such political and military logic, let alone achieving it. As a consequence, too many ill-equipped, ill-prepared Europeans are sent to dangerous places only able to act at a level of risk to themselves and those around them that contemporary military technology should render unacceptable.

The facts speak for themselves. According to the IISS Military Balance 2007, the defence budgets for EU member states combined totalled €64.31bn in 2006. Of which, UK spending was €41.9bn (26 per cent of the total), France spent €35.4bn (22 per cent), and Germany €27.9bn (17 per cent). Thus, the biggest three EU member states spent 65 per cent of all defence expenditure by the EU 27. In other words, 24 EU member-states are spending an average of €3bn per state, per annum on defence. This is nothing like enough to generate the capabilities required.

Of the second rank grouping, Italy spent €12.1bn (7 per cent) of the total, the Netherlands €7.76bn (5 per cent) (even though the Netherlands has a population a third the size of Italy's) and Spain spent €7.69bn (5 per cent). Sweden spent €4.33bn (3 per cent) and Poland €4.26bn (3 per cent). Thus, the five second rank states muster some 23 per cent the total defence expenditure of the EU. Consequently, eight EU member states contribute 88 per cent of total expenditure on defence by EU member states whilst the remaining nineteen member-states can only muster 12 per cent of which a significant portion is provided by Greece. Moreover, whilst most defence budgets are at best stagnating, the gap is likely to widen further with the 9 October announcement by the British that they will increase defence expenditure to €3bn by 2010 as part of the Comprehensive Spending Review. By comparison, US defence expenditure in 2006 was €363bn.

The Structure and Approach of the Report

The report is divided into six chapters. Following this Introduction, Chapter One examines the nature and scope of the concept of interoperability and to what extent it has now moved away from the specific domain of equipment standardization. Chapter Two looks at the ways and means by which European armed forces (air, naval and ground forces) aim to work efficiently together and the constraints that prevent 'inter-operation'. Chapter Three considers the modalities and methods according to which those forces should proceed to promote stronger interoperability to how best to guarantee the future effectiveness of future European military structures. Chapter Four presents an interoperability case study based on a visit by one of the authors (Julian Lindley-French) to Afghanistan. Chapter Five discusses the technical convergences and capabilities that will have to be developed between European armed forces in order to give each of them the same common/standard ability to support collective European military goals within the framework of the European Security and Defence Policy (ESDP). Finally, Chapter Six puts forward some specific recommendations aimed at enhancing interoperability between the armed forces of EU member states and the role the EU institutions might play in supporting such an approach.

As a basis for analysis the report first examines the audit trail of European interoperability by considering recent operations in which Europeans have been involved (both NATO and EU).

At the force level the report assesses in the round the utility and impact on interoperability of existing European formations, such as Battlegroups and Eurocorps, as well as the NATO Response Force (NRF) and the International Security Assistance Force (ISAF). Drawing these lines of analysis together the report follows a classic ‘lessons learned’ format. The development of interoperability requires the constant monitoring from force development and generation through training and operations founded on the proper assessment of feedback and response. To that end, the Lessons Learned process has five steps upon which the report draws involving the collection of data and information; analysis of data and information; initial recommendations; implementation of recommendations; and finally verification that the recommendations work. Whilst implementation and verification are beyond the scope of this report, collection, analysis and thereafter recommendation will form the core of the practical approach adopted herein.

Chapter One

1. The Nature and Scope of the Concept of Interoperability

Interoperability concerns the effective ‘mixing’ of allied capabilities, to make them as collectively compatible as possible in order to efficiently combine their respective military forces to military effect⁶. Interoperability is not new and was promoted as far back as 1949 with the creation of NATO, notably in the field of equipment. Accordingly, a huge body of regulations governing interoperability has been set up within the framework of the Alliance. This has mainly been carried out under the aegis of the US although the Independent European Programme Group (IEPG) was set up in the mid-1970s to give such initiatives a European flavour (and which was independent from NATO at the insistence of France).

Today, the scope and direction of interoperability in the Alliance is causing concern amongst all the European member nations. Specifically, like it or not, Europeans are confronted with a scale of US innovation and new modes of warfare based on the intense use of sophisticated and complex C4ISR (command, control, communications, computers, intelligence surveillance and reconnaissance) systems that go way beyond the force concepts and budgets of the vast majority of European states. In spite of the many lessons learned from Iraq and Afghanistan the mirage of high-tech solutions, as the panacea to every military problem, continues to seduce US planners and is often forcefully sold to Europeans. US views on future warfare are epitomised by the concept of network centric warfare (NCW) that many Americans would like to see drive European standards of interoperability. There is much to be commended in the sheer ambition of the architecture that support NCW which, if fully implemented, would see interoperability at its most intense. Equally, Europeans would run the very real risk of even greater dependence on the US, as Washington would remain the sole holder of the ‘keys’ of the so-called ‘system of systems’ at the heart of NCW.

Again, the degree and shape of interoperability is thus ultimately a political rather than a military decision, given the essence of the US view of “coalition network centric warfare”. European leaders, therefore, must now answer some profound questions about the future

⁶ Interestingly, according to the “Glossaire interarmées” from the French *Etat-major des Armées*, “division emploi” the allied definition of interoperability (into French) is the following: “*the capability of several systems, units or organizations to operate together thanks to the compatibility of their organizations, doctrines, procedures, equipment and respective relationships*”.

security and defence architecture of Europe. Does the NCW approach to interoperability represent a coherent policy at a time when the EU is trying - through ESDP - to acquire a political role and influence on the international scene? Alternatively, should Europeans, simply for the sake of increased interoperability follow the US military lead? Can they afford to financially? Or not afford to militarily? Or, should Europeans invent their own 'grammar' of warfare which better corresponds to European views on warfare but which nevertheless retains a high degree of co-operability with the US?

Given the lessons being learned from contemporary operations both the US and Europeans are fast approaching a tipping point. Certainly, several Europeans have both the military competence and most of the technological know-how to develop high-tech fully interoperable military systems. Such capability is patently obvious as Europeans compete relatively efficiently the world over in the civilian high-tech market. However, to take such an independent stance would require the creation of a European model of warfare specifically tailored to the needs of EU member states and thus with less emphasis on technology than in the US.

Cost-effectiveness will be an important consideration. Europeans are already faced with the challenge of having to generate interoperability that can withstand robust operational environments under the double pressure of the inflating costs of weapons systems and the sheer complexity of contemporary high-tech weapons systems and the high cost of the professional personnel who can handle them. Notably, this is the case in the fields of 'enablers', particularly complex C4ISR systems that are out of the reach of any single EU member state given the historically low defence budgets from which most suffer.

Some believe that the common development of these enablers' would not only help resolve many of the difficult questions raised by contemporary effective interoperability, but would provide ESDP with adequate means to conduct military operations on a large scale. Such an approach would also help facilitate the emergence of this new 'made in Europe' approach to warfare. The bottom line (as the Americans would say) is that unless the US changes track or Europeans spend a lot more, effective military interoperability is unlikely to be affordable for most Europeans in the near-term.

Today, the overwhelming lead of the US in military R&D allows US forces to share a vision of future military engagement that by definition emphasises technology as the main driver of future military action. However, the recent use of force by the US, Europeans and, indeed, Israel in Lebanon in 2006, has shown that technological superiority cannot alone guarantee military success. Moreover, while the US military is beginning to 'talk the talk' of the Comprehensive Approach, its lack of an imperial policing tradition prevents it from 'walking the walk'. Consequently, the gap in strategic cultures is very apparent on the ground in places like Afghanistan and Iraq. Given these new/old realities, interoperability must and should not to be overly focused on solely technological compatibility of weapon systems and their use. Indeed, recent lessons learned reinforce the need to return to basic considerations about warfare. This is particularly the case for ESDP where interoperability must not only encompass military-technical considerations, but those environmental considerations in which military forces evolve, such as military culture, doctrine, training (notably in built-up areas), rules of engagement, resilience of ground troops, etc.

Interoperability is also the pre-condition for operational effectiveness of an alliance or a coalition. Effective military interoperability will become ever more important to mission

success when European forces are participating in ESDP military operations that will almost inevitably be more robust than recent EU-led operations. Moreover, given the complex, political nature of most European operations interoperability must be more than ‘classical’ interoperability. Acting on behalf of the EU entails a different political relationship to the generation of military effect because the EU is more than a traditional alliance between sovereign states, being a political entity in its own right, the ultimate aim of which remains to establish “*a common defence policy which might in time lead to a common defence*” (article J4 of the Maastricht treaty). If such a statement still has some political credibility then interoperability in an EU context must afford its member-states an opportunity to think strategically based on a long-term security perspective. In doing so it has to bear in mind the potential, if not yet agreed, goal of a collective European military policy that must inevitably one day demand role specialisation for some.

Hitherto, the EU has largely avoided establishing separate interoperability standards that would replace those of the Atlantic Alliance and many members would still be resistant to such a development at both operational and tactical levels⁷. However, there are two compelling reasons that could see the need to re-evaluate such constraint. First, there is the perceived impossibility of keeping up with the US. Second, the European approach to the Comprehensive Approach is different to the US approach to Full Spectrum Operations (FSO) or the Effects-Based Approach to Operations (EBAO). Consequently, in the EU, context interoperability must also be about far more than the military sphere. Indeed, as the Headline Goal states broad Euro-interoperability encompasses a comprehensive understanding of the concept based on

“...the ability of armed forces to operate together and act in conjunction with other civilian instruments. As an instrument of an increased efficiency in the employment of military capacities, it is contributing decisively to achieve EU objectives in crisis management operations”.

The search for improved broad interoperability is one of the qualitative improvements sought by Headline Goal 2010, but as ever the tension between ambition and investment is acute. The problem of ESDP is that because its end-state is far from agreed the voluntary approach invariably leads to inadequate commitment and resources. Consequently, in the real world, ESDP takes second place to NATO because free-riding on the US and the larger Europeans remains an attractive option in the short-term.

1.1 The Components of Broad Interoperability

If technical interoperability is necessary to achieve proper military synergy among allied forces within the framework of an alliance or a coalition, an ability to understand and bridge differences in doctrine, training, organisation and even culture are key components of contemporary interoperability. Such an understanding of broad interoperability demands an adjustment to the traditional definition that was established during the Cold war and which by and large still pertains is:

⁷ Colonel Philippe Roman-Amat, ‘European Union: interoperability on the move’, *Doctrine*, no.11, Paris.

“The ability of systems, units and forces to provide services to and accept services from other systems, units and forces and to use these services so exchanged to enable them to operate effectively together”⁸.

Today, the sheer scope of interoperability has necessarily become far broader through the increased number of multinational operations and the dynamic of technological evolution - some would say revolution. This latter factor has placed C4ISR at the centre of effective interoperability because the conduct and the success of military operations require the sharing of ‘common operational pictures’ between coalition partners.

In fact, interoperability can today be defined as *“the ability to operate in synergy in the execution of assigned tasks”*⁹. In other words, interoperability must encompass technical and cognitive, as well organisational and doctrinal, dimensions. It must also reflect the fact that increasingly military operations are required to support complex political end-states, such as restoring political order and stability for effective humanitarian/peacekeeping missions.

Accordingly, military operations have to be understood as part of a broader course of actions with interoperability necessarily embracing various and multiple spheres, including combined, joint, inter-agency contingencies and multinational operations, as well as various domains of knowledge if the preparation, planning and execution of military operations are to be achieved within the context of rapid decisive operations (RDO). Indeed, a rapid decisive operation must by its very nature integrate knowledge, command and control, and effects-based operations if the desired political/military effect is to be generated. Necessarily, in preparing for and conducting a rapid decisive operation the military must act in concert with and leverage the other instruments of national and allied power first to understand and then to reduce the adversary’s critical capabilities and coherence.

The paradox is clear: if Europeans set out to develop such a capability by themselves they would eventually create an interoperability architecture that would render interoperability with US forces at the higher-end of effect more likely than today.

1.2 The Role of Operational Net Assessments in Rapid Decisive Operations

Interoperability with the US is not the only challenge. In addition to such self-generated heterogeneity European members of a coalition must also frequently interact with partners the equipment of which is not compatible with European powers and/or lack experience of interacting with NATO or EU forces. Again, culture, doctrine, equipment and training are key components of interoperability. As a result, cultural interoperability is vital and demands an ability on the part of military personnel from diverse countries to work together in understanding each other in a joint and allied environment. For example, such a challenge is evident in the daily interaction of Western forces and the Afghan National Army (ANA) in southern Afghanistan.

Shared codes and norms aimed at building up a common understanding of the conditions and character of military operations are crucial. For Europeans, concrete solutions are needed, based on an environment in which reciprocal knowledge and trust is generated, that would be designed to generate cultural interoperability. This will not be easy given the trust that has

⁸ NATO Standardization Agreement, AAP-6.

⁹ Ibid.

been lost between key Europeans as a result of differing opinions over the utility and conduct of operations, particularly in Afghanistan. However, in a slow, 'soft' and limited way some initiatives are pointing towards the longer-term narrowing of the cultural interoperability gap. The ESDC (European Security and Defence College) represents an interesting, albeit putative, tool for the dissemination of a common European strategic vision among European civilian and military officials. It is a start.

Doctrinal interoperability i.e. the harmonisation of concepts concerning force employment, relates to the methods, organisation (such as the harmonisation of command structures) and procedures (commonality) that permit different forces to work together within a joint environment. Specifically, interoperability herein aims at defining actions that can enable common mission success. Such interoperability is facilitated by the definition of common references, based on similar points of doctrinal view. Military doctrine is again about the way armed forces go about their business. Doctrinal interoperability is thus only attained when common practices are jointly tested, experienced and then agreed.

For its part, NATO defines three levels of interoperability:

- Compatibility is defined as, “*The suitability of products, processes or services for use together under specific conditions to fulfil relevant requirements without causing unacceptable interactions*” (AAP-6 (2007));
- Interchangeability is defined as, “*the ability of one product, process or service to be used in place of another to fulfil the same requirements*” (AAP-6 (2007); and
- Commonality is defined as; “*the state achieved when the same doctrine, procedures or equipment are used*” (AAP-6 (2007)).

NATO is endeavouring through Allied Command Transformation (ACT) to press for greater interoperability of NATO/European forces on complex missions based on these criteria. Indeed, both the US and most European allies rely heavily on ACT to make NATO more capable and more expeditionary. This concept of transformation implicit in the ACT vision is itself borrowed from an American concept developed by the US Joint Forces Command (JFCOM).

Transformation now has a long history. Indeed, US transformation goals were encapsulated as far back as the 2001 Quadrennial Defense Review (QDR). Indeed, QDR 2001 represents the charter for transforming US forces and retains much of its paradigmatical power and energy. “Transformation” was portrayed as being “*an endeavour that must be embraced in earnest*” and was based on four pillars: strengthening joint operations; experimenting with new approaches to warfare, operations, concepts and capabilities; exploiting US military intelligence advantages; and developing transformational capabilities.

Figure One: The Joint Force End-State

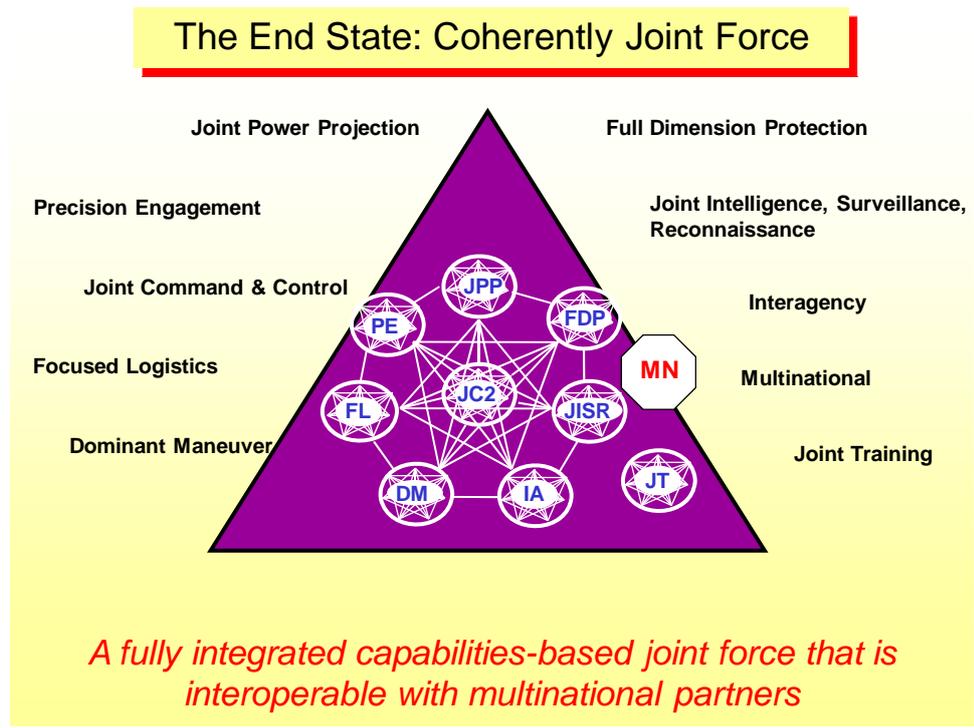
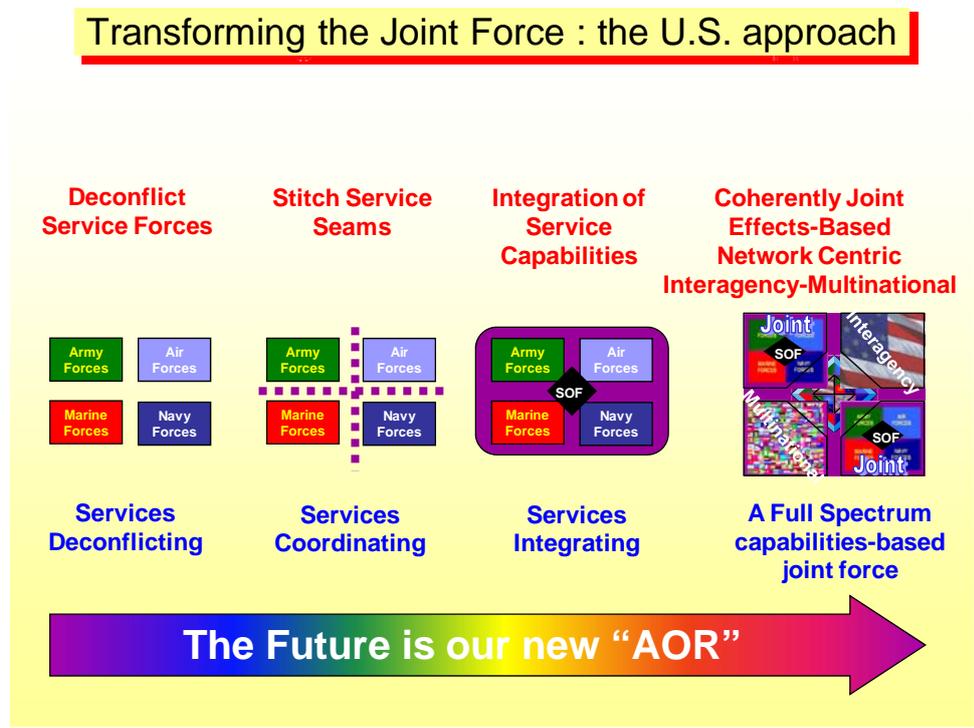


Figure Two: US Transformation Goals



Transformation was thus designed to create a new way of warfare, as implied in military concepts inherent to “transformation” such as already mentioned Rapid Decisive Operation (RDO). The main reason US Transformation creates multi-faceted problems for America’s allies, is precisely because it is aimed at revolutionising the conception of warfare itself. As such it necessarily transcends national boundaries. For Europeans, the adaptation of the concept of transformation within the NATO machinery has so far met with mixed results. As General Harald Kujat, then chairman of NATO’s Military Committee pointed out few years ago:

*“Can the American Transformation process be exported as it is to NATO? The answer to that is a resounding “no”Within NATO the Alliance Transformation cannot follow the same path. When dealing with transformation, NATO must consider a very specific challenge which does not encumber US transformers: multinationality of sovereign States.”*¹⁰

Furthermore, the way transformation was initially presented to Europeans created the impression that the stakes themselves transcended merely military affairs, particularly when the catalyst to transform NATO forces was the NATO Reaction Force (NRF). Indeed, transformation appeared to some the price the US was demanding to remain engaged in the Alliance. Put simply, the nature and scope of transformation could no longer be disconnected from the overall political context of the transatlantic relationship. Transformation could also not be disconnected from the future of ESDP given its potential impact on European armed forces and the contradictory pressures of moving beyond the stagnation that was afflicting the transatlantic relationship and the slow pace of virtually stalled European defence integration. Almost by default the NRF has thus become the benchmark for modern interoperability, and yet the problems it is currently facing demonstrate the extent of the challenge. This is because the NRF generates a complex process of force certification for various sub components of European forces in order to ensure they can form part of the NRF. Unfortunately, the certification process has proved so complex that it is either unaffordable and/or unattainable for many EU members that are also members of NATO. It is the interoperability paradox of the age and is beginning to generate real tensions in the force planning process.

For example, the certification of a headquarters (HQ) required to command the NRF for six months, imposes some eighty criteria that must be fulfilled - all linked to interoperability. An army corps HQ must meet at least fifty criteria and more than three hundred sub-criteria to be certified as a NATO High Readiness Force (HRF) HQ. Not surprisingly, the NRF is not doing very well in respect of interoperability, particularly concerning C4ISR. An evaluation was conducted in 2006 focused mainly on the improvement of interoperability at national level and those NATO systems which would be deployed in an NRF headquarters. The results were not encouraging because the land, maritime and air components were not interoperable, particularly as regards data sharing, which is a critical area.

Interoperability of equipment is also a key factor in enabling a coalition to act quickly and effectively. Through the NATO Standardisation Agreement (STANAG) process, which defines the capacities and features of the various and varying kinds of equipment, technical interoperability is now reasonably well-organised in both the EU and NATO.

¹⁰ General Harald Kujat, ‘The Transformation of NATO’s military forces and its link with US transformation’, speech at SACLANT seminar, 21 January 2003, available website at: <http://www.nato.int/ims/2003/s030121e.htm>

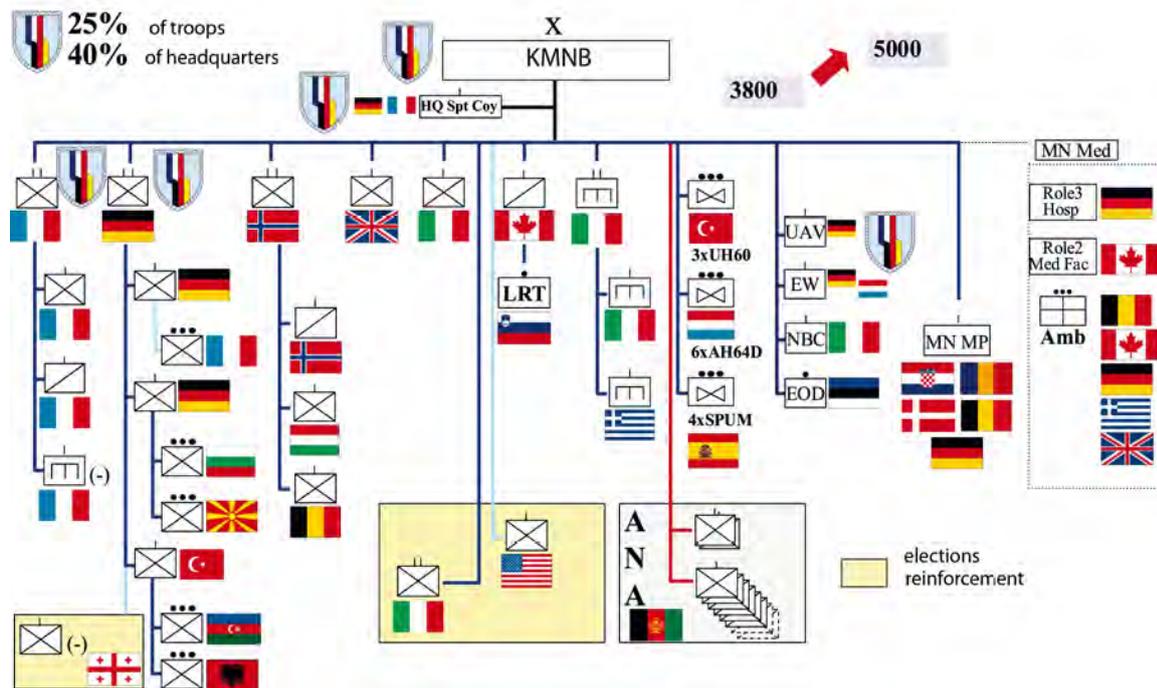
1.3 Taking the MIC: A Few Good Actors

Interoperability is thus the essential feature of any European or multinational operation. It allows military commanders to operate synergistically, to develop a mutual understanding of the nature and the pace of operation and conduct complementary actions in a given theatre of operations. Such a requirement for interoperability stems from the experience of the 1990s and the early 2000s when a number of multinational operations were planned and conducted.

The Kosovo air campaign involved a very large coalition. NATO's Stabilisation Force (SFOR) in Bosnia and Kosovo Force (KFOR) acted with partners from many parts of the world, including Russia. Outside Europe, the need for effective interoperability between European forces is even more important as it is a pre-requisite for successful engagement. In the Ivory Coast about 4,000 French troops were working alongside 6,000 UN troops drawn from many different African nations. The British had a similar experience in Sierra Leone. In Iraq, Haiti and Afghanistan European forces have experienced very different approaches to, and levels of, interoperability. This is because multinational military operations no longer represent a single end-state or approach, often involving countries each of which has a distinct political rationale for engaging military forces that accept or demand very different rules of engagement (RoE). Indeed, it is the issue of so-called 'caveats' that has helped so blight the effectiveness of the NATO-led International Security Assistance Force (ISAF) in Afghanistan.

Furthermore, there is an obvious trade-off between political visibility, which calls for multinationality and military effectiveness, which depends on homogeneous forces. This is illustrated to effect in the setting up of the EU Battlegroups, which is too often a function of the need for political visibility. However, the military effectiveness of high-intensity operations normally depends on the military effectiveness of homogeneous brigade-size units. Paradoxically, interoperability should not, therefore, lead to an automatic set of obligations in the context of effective future European operations because it is unlikely that all EU member states will participate all the time, especially in the command structure. Put simply, some do it better than others. Again, ISAF – and particular the organisation of the headquarters of the Multinational Brigade in Kabul (set up between July 2004 and January 2005) - graphically illustrated the confusion that is caused by the participation of twenty eight very different nations at very different levels of culture, approach, capability and capacity as illustrated in Figure Three (below).

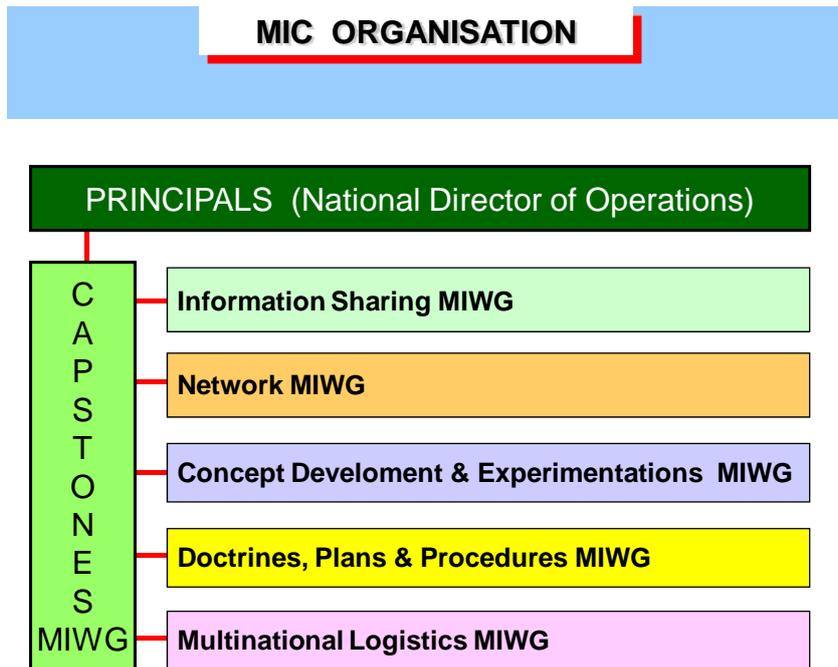
Figure Three: ISAF Headquarters Structure January 2005



Source: French MoD

There is a basic truism in military affairs, the greater the number of participants in an operation the greater the likely confusion. When such operations are oriented towards peacekeeping missions, the costs and the potential consequences (political, military, and organisational) are acceptable. However, if the operation involves high-intensity, advanced, expeditionary, coalition warfare the costs can become unacceptable and lead to both political and military disaster. This is why since 1999 a few selected countries with military capabilities at the strategic and operational levels have been working on enhanced interoperability within a group entitled the Military Interoperability Council (MIC). The MIC is a multinational, operator-led forum, tasked with identifying interoperability issues and articulating actions, which if nationally implemented, would contribute to more effective coalition operations. Interestingly, the MIC member nations cut across traditional alliances which is itself telling and reflects perhaps the emergence of new informal groupings of like-minded states. The MIC is comprised of Australia, Canada, France, Germany, Italy, the UK, and the US. Additionally, New Zealand and NATO's Allied Command Transformation (ACT) have official observer status in the MIC.

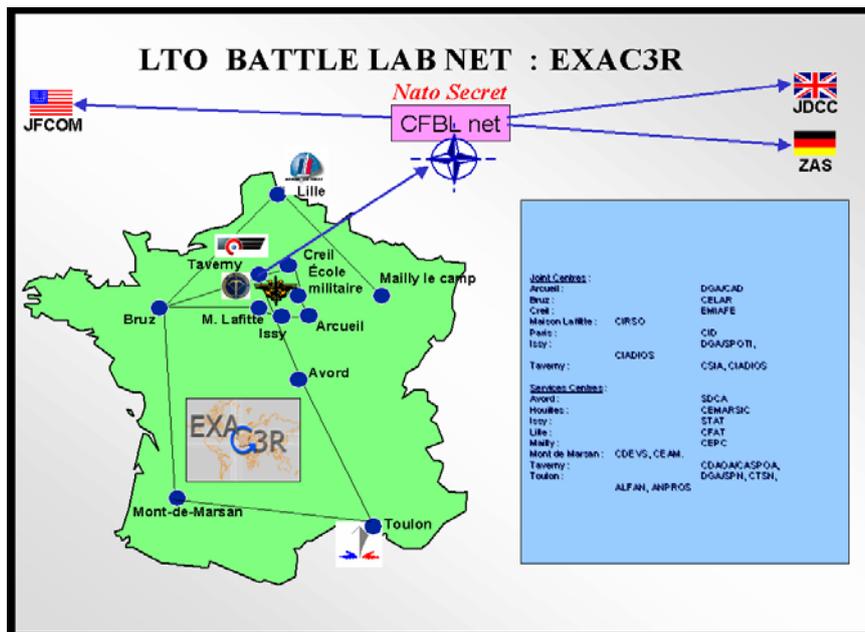
Figure Four: The Structure and Function of the Military Interoperability Council



The focal point of the work of the MIC is the Multinational Interoperability Working Groups (MIWGs), the activities of which are under the supervision of the so-called Capstone MIWG. The specific agenda concerns fundamental aspects of effective military interoperability such as enhanced information sharing; doctrines plans and procedures; networking, the task of which is to develop interoperability for exchanging information and data using a confidential network among MIC members entitled GRIFFIN; and the Concept Development and Experimentation Working Group is tasked with the definition of new concepts of operations (CONOPS) in a multinational framework.

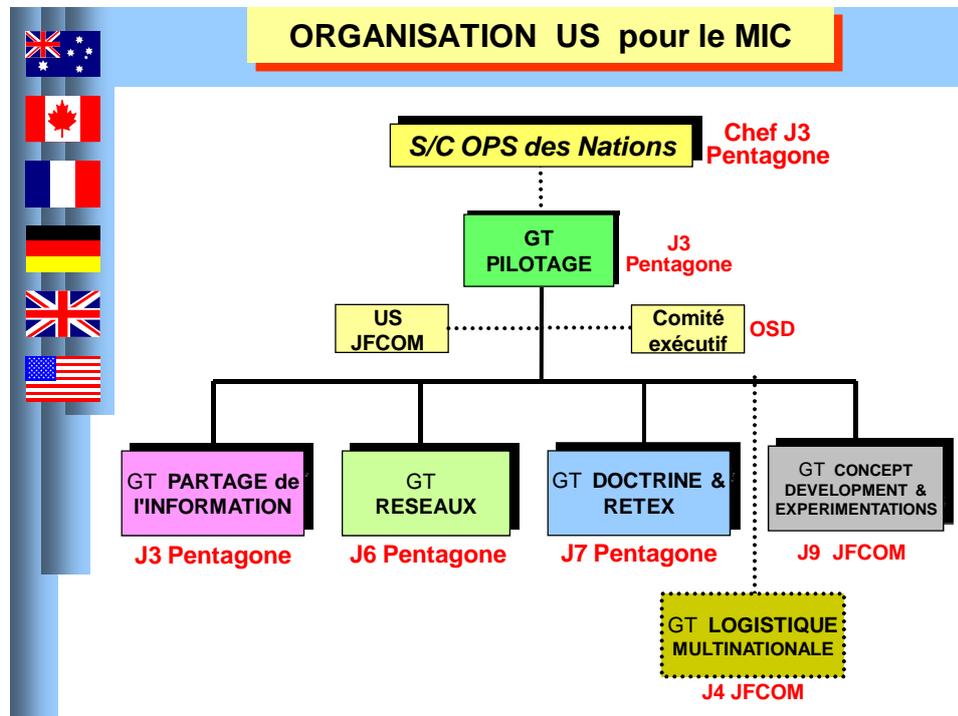
The GRIFFIN network is of particular importance to effective military interoperability. It is a Combined Wide Area Network (CWAN) the tasks of which *inter alia* allows and promotes interaction between national Technical and Operational Laboratories (CFBLNet: Combined Federal Battle Lab Net or TOL) The TOL is designed to establish a live-network of technology demonstrators, simulation tools and research centres. The basic idea of which is to take advantage of advanced network management systems for the conception, development and experimentation of innovative capabilities, as well as their confirmation. As such, these laboratories represent key interoperability facilitators for preparing future high-intensity and interagency operations. The experience gained by EU members of the MIC undoubtedly has much relevance to the application of new interoperability tools within the framework of ESDP looking beyond Headline Goal 2010 in a manner that is both US and NATO compatible.

Figure Five: The Battle Lab Net



Example of a French LTO; source: French MoD

Figure Six: The Organisation of the Military Interoperability Council



Chapter Two

2. NATO and European Military Interoperability

Recent NATO experience is particularly important, and consequently the report undertakes a thorough assessment of interoperability within the Alliance. The basic problem that recent NATO operations demonstrate is that the doctrinal and technological gap between US forces and most Europeans is reaching a critical level of dysfunction. Indeed, operations in Afghanistan have demonstrated the extent to which the operational culture of Americans and Europeans contrasts. With the partial exception of the UK, it is clear that for all but the most dangerous operations Europeans by and large prefer to operate separately from the US. The Americans also prefer to operate separately from the Europeans since most US combat forces are not assigned to European Command (EUCOM) and do not necessarily share interoperability standards with NATO's European forces. In spite of the 16,000 personnel under ISAF command the split commands of ISAF and the American-led Operation Enduring Freedom (OEF) testify to this. Of course, on the surface, the missions of ISAF and OEF are very different. For the sake of political convenience, ISAF is devoted to stabilisation and reconstruction, whilst OEF is devoted to counter-terrorism. In reality, particularly in the south of Afghanistan, such divisions are semantic with British, Dutch, Canadian, Australian forces engaged in pitched battles with the Taliban as part of a comprehensive counter-insurgency campaign. In spite of having an American commander, Gen McNeil, and a significant US presence, cultural divergence is all too apparent.

Unfortunately, ISAF operations also highlight a worrying and growing Euro-Euro gap. The lack of a European consensus over coercion or the use of force is all too apparent. Consequently, on contact with danger in Afghanistan, European solidarity seems to collapse - with profound implications for the future cohesion of both NATO and the EU. Therefore, before true European military interoperability can take place the need for a European strategic culture is paramount. Paradoxically, the split between ISAF and OEF does suggest that such a putative culture might be slowly developing. Indeed, it might be argued that only through the creation of a European military hub that is distinct from the US and NATO can such a process really gather pace. NATO's problem is that its primary military purpose is the efficient organisation of Europeans around US leadership. It is, therefore, first and foremost an enabler for US-led coalitions.

Such a relationship remains important because it provides for an escalation continuum. However, as the gap between US and European capability and capacity grows the need for an additional European planning and command hub would seem also to be growing. This could (and perhaps should) be organised around the EU. Indeed, if ESDP is underpinned by any strategic rationale the creation of such a hub would make sense. Unfortunately, given the gap within Europe there is a very real danger that unless all Europeans meet their defence expenditure, modernisation and force generation commitments a European hub would be reduced to those few states able and willing to organise themselves around the British and French. In such circumstances not only will an *ad hoc* approach become the force generation and operations norm, but the bigger, more capable powers could feel it necessary to step outside EU-NATO institutional frameworks completely.

2.1 The NRF Saga

The NATO Response Force (NRF) is a case in point. Although it reached Full Operating Capacity (FOC) in 2005 it is now deemed no longer to be at FOC because most Europeans are too engaged on operations to provide a standing force to the NRF. Thus, the NRF is being reduced to a planning and command structure with no forces assigned to it and thus could end up as no more than a permanent paper exercise. Such a concept might look acceptable on paper but without a constant programme of exercising and training any such 'force' will and must atrophy. This is something that could also afflict EU Battlegroups. To be effective, military interoperability must be worked at and worked up. Indeed, interoperability is as much a mindset challenge as a technology fix or a way of doing business together, and requires forces from very different states and backgrounds to work together regularly if they are to be both efficient and effective when engaged on complex operations. This is particularly important as European militaries move into so-called fourth generation warfare (4GW) involving complex peacekeeping and peace support operations (PKO/PSO) at strategic distances from Europe, over an extended time period and requiring forces able to respond rapidly to missions across the full spectrum - from low intensity to high intensity.

In June 2007 the NRF was tested during Exercise 'Steadfast Jackpot', which was designed to validate and certify the chain of command and control elements dedicated to NRF 9. The results showed the same constraints as the three major NRF exercises of 2006 – Brilliant Mariner, Steadfast Jaguar and Steadfast Jackpot 2006. This is important because much of the NRF experience is directly relevant to the interoperability of European forces, not least because the NRF comprises these same forces. Moreover, like the Battlegroups, the main focus of the exercise was to train as a Combined (multinational) and Joint (tri-service) Force in pursuit of a Chapter VII operation under the UN Charter. In particular, the Exercise was founded on the need to work up the training and certification of the NRF whereby each nation commits forces on a rotational basis to guarantee the permanent availability of a combat-ready deployable force.

The results were telling. Because of shortfalls of many of the European forces engaged, the NRF lacks modern information networks that profoundly undermine effective interoperability. These include networks for basic command, control and communications, as well as for intelligence, surveillance and reconnaissance (ISR), force operations and logistic support. Without such basic enablers the NRF will find it difficult to work closely with US forces, be constrained as a combined, joint task force and will be unable to generate the kind of force multipliers that could overcome its relatively small size as well as incorporate modern force doctrines and operational concepts. Indeed, without a truly deployable Combined Joint Task Force (CJTF) Headquarters it is difficult to envisage the NRF undertaking robust, force entry operations at distance from Europe and at the high end of effect¹¹.

From 7-15 June, 2007 the EU held MILEX 07, a military exercise co-ordinated by the EU Military Committee (EUMC), supported by the EU Military Staff (EUMS) and under the guidance of the Political and Security Committee (PSC). The objective was to test the new EU Operations Centre. No troops were involved in the scenario, entitled Alisia, which focused on an EU bridging operation in the framework of a UN humanitarian crisis response

¹¹ For an excellent review of the challenges faced by the NRF see Kugler, Richard, *The NATO Response Force 2002-2006*, (Washington: NDU, 2007).

mission to protect displaced persons as clashes between the government and rebels in a fictitious country worsened. Although effectively a limited-scale mapping exercise, accounts suggest some problems were encountered vis-à-vis force generation and getting and sustaining forces into the operation. Moreover, the exercise was also designed to optimise European strengths in as much as an operating base was conveniently close by. Whilst useful for working up command procedures and the interoperability of staff, the exercise was of limited utility in terms of dealing with the kind of 'real world' unexpected contingencies for which Europeans must prepare if they are to be a credible force for good in such circumstances. Planning for what Europeans can do, rather than what they are likely to need to be able do, is a failing that has afflicted European forces in the past with dangerous consequences.

However, of equal importance is the structure NATO devotes to promoting interoperability. Indeed, operational interoperability is a direct factor in the combat effectiveness of a fighting force. At the very least such effectiveness must be found on standardised equipment, supplies and their systems. Indeed, effective interoperability represents a fundamental force multiplier. The minimum objectives needed for mission success of multinational formations are interoperability of the principal equipment, supplies and procedures. The NATO Standardisation Organisation (NSO), supported by the Committee for Standardisation and the Standardisation Agency, are designed to enhance interoperability in order to contribute to the ability of Alliance forces to train, exercise and operate effectively together and with others. To that end, the NSO seeks to initiate, harmonise and co-ordinate standardisation efforts through the Alliance and provide support for such efforts between members. On a practical level interoperability within the Alliance is constructed around the so-called Allied Joint Publications (AJP), which provides the benchmarks for all aspects of interoperability.

Specifically, NATO interoperability is focused on the development, agreement and implementation of interoperability concepts and doctrines linked closely to the Defence Planning Process (DPP). The interoperability objective is thus to establish common requirements covering operations, materiel acquisition and procurement, technical and technological synergies and common administrative tools and approaches.

However, through its link to the US Joint Force Concept via Allied Command Transformation (ACT) the NATO interoperability process implies a different level and approach to force levels and structure compared with the EU approach. This creates an implicit tension given the varying levels of ambition inherent in both the NATO and EU force and operational concepts. The US is driving for an Alliance that can operate globally in the security environment at a high level of operational and technological effect, whilst most Europeans seem content with a purely regional role. If all the capabilities identified in the EU's Comprehensive Capabilities Development Programme (CCDP) are achieved it is reasonable to assume that a level of compatibility between NATO and EU force planning and development could be achieved. However, not only is performance towards EU capability goals patchy at best, the US is steadily stretching away from its European partners in terms of both capabilities and capacities. Moreover, with defence inflation now running at around seven per cent per annum, static defence and equipment budgets are being eaten into thereby exacerbating the spending gap between the US and many Europeans¹².

¹² Interview with Lord Guthrie, former UK Chief of the Defence Staff, BBC Radio 4, 8 November 2007.

Equally, with the departure of Donald Rumsfeld from the Pentagon the drive towards leaner, meaner and more agile forces is emphasised less these days. The experience of Iraq and Afghanistan has convinced US planners that effective civil-military co-operation is absolutely necessary in such places - as part of what are termed Full Spectrum Operations by US military planners. What Europeans call the Comprehensive Approach is indeed making some inroads into US thinking. Thus, with the departure of Rumsfeld and the lessons learned from Iraq and Afghanistan all too apparent, some optimism exists for believing that EU and NATO approaches to force and operational planning can be made more compatible. Certainly, the current travails of the NRF are partly due to a re-conceptualisation of the force transformation model that was so beloved of the Rumsfeld years. The NRF was originally conceived as a 'clothes hanger' for the rapid modernisation of European armed forces so that they could form advanced expeditionary coalitions designed to afford a high degree of interoperability with very high-end US forces.

2.2 The Capability-Capacity Crunch

A comparison between the Battle Groups and the NRF and the basic dilemma faced by both highlights the planning contradictions of both the EU and NATO as capability competes with capacity and thus leads inexorably to a capability-capacity crunch. The bottom-line is this. The more the focus is on advanced expeditionary military affect, the more expensive each individually capable airman, soldier, seaman becomes. A medium-sized European state is thus faced with a tough choice: either, increase the defence budget to maintain a similar size of force, albeit transformed (which is simply impossible given that only seven NATO members spend two per cent or more of GDP on defence); or, reduce the size of the force but improve its performance quality. Alternatively, a state can maintain the size of force but make little effort to improve the performance quality. Frankly, all three 'approaches' can be found in both NATO and the EU with profound implications for military interoperability.

The figures again speak for themselves. Historically, the US has spent between three and five times as much on defence investment as Europe. Certainly, the US spends almost three times as much per soldier/sailor/airman as Europeans (and Asians) with the noticeable exception of the British and French. Moreover, the US Research and Development (R&D) budget is some eight times that of all NATO Europe. Indeed, in 2004, whilst the US spent \$61bn on defence R&D, NATO Europe spent some \$8bn, with 80 per cent of that coming from Britain, France and Germany. Again, this has profound implications for military interoperability both across the Atlantic and within Europe¹³.

Such imbalances are also demonstrated in the defence R&D spending per capita. In 2004 the US spent \$147.20 per capita, France \$48.60 and Britain \$51.80. Italy, it should be noted, spent only \$3.50 per capita and the figures for the rest are by and large even lower. Part of the explanation for such poor performance is the nature of the expenditure itself. Expenditure of R&D and capital equipment budgets is being badly undermined by excessive personnel and operation & maintenance (O&M) costs, which on average exceed 50 per cent of defence budgets, if the UK and France are excluded. These figures suggest bloated defence establishments, poor 'tooth to tail' ratios and excessive numbers of personnel who make little or no contribution to military effect. Again, the implications for European military interoperability are profound.

¹³ All the figures in this section are drawn from the author's own research using a range of sources including SIPRI and DASA.

This weakness is again reflected in defence modernisation funding. If the European modernisation effort is compared with the US as a percentage of US investment per dollar spent per soldier on modernisation, the figures are even more telling. Poland spends six per cent, while the Czech Republic spends seven per cent, which give some indication of the state of forces of most of the newer EU and NATO members. Belgium spends 10 per cent, Spain 11 per cent, with Italy at 17 per cent and Germany at 21 per cent. Only the Dutch at 41 per cent and the French at 42 per cent approach anything like respectability. It is only the British who spend some 95 per cent of the US spend per soldier who can be said to be in the same league as the Americans. However, much of the British effort is driven by their determination to be interoperable with the US. The consequences are profound, for even at Britain's level of defence expenditure the cost per soldier has seen the British Army reduce to a historically low level of 104,500, while the Royal Navy is being starved of essential equipment, in spite of the recent decision to build two super-carriers, *HMS Queen Elizabeth* and *HMS Prince of Wales*. Consequently, the British have a little bit of everything and not much of anything, which hardly befits Europe's strongest military power.

The effect of such imbalances can be seen clearly on operations. The international standard for sustainability is founded on four principles: a) that a force must be sustainable for three years; b) that troops must be rotated after six months deployed on operations; c) that troops not be re-deployed for up to one year; and, hence, d) that with one force deployed, two must be in reserve. In all four areas European (and even US) forces are stressed given the current operational tempo. Put simply, forces are being deployed far longer than six months on average with the inevitable wear and tear on equipment and personnel. The crisis in retention of key technical grades faced by the British, the Dutch and other European professional armed forces is testament to such stress, particularly at a time when the wider economy is relatively strong. Moreover, forces are being returned to theatre far sooner than a classical force rotation would suggest is wise. The British Army would need at least two years away from operations to recover its strength to the level it enjoyed prior to March 2003 and the invasion of Iraq. 16 Air Assault Brigade, Britain's elite force in southern Afghanistan, was until recently operating with only one of its four battalions. The stress is also seen in the excessive use of reserve and volunteer reserves simply to make up the shortfalls. It is not surprising, therefore, that the British have drawn down their forces in Iraq from an historic high of 42,000 at the time of the invasion to some 5,000 in October 2007 and likely lower in 2008.

Put simply, the British are getting out of Iraq through Afghanistan because they can no longer undertake one and a half concurrent medium-sized operations, let alone two. The rest of Europe, with the exception of the French, could mount nothing on the scale of current British operations as individual forces; something that is borne out by the difficulty that the whole of NATO Europe is having achieving the Alliance standard of 8 per cent of the force deployed with 40 per cent of the force deployable. Again, only the British and French achieve such levels.

Therefore, the problem for Europeans is the following: given the rate and intensity of the operational tempo and lack of deployable forces the ability to undertake advanced expeditionary coalition operations is being steadily eroded. As at October 2007 the NRF is no longer at Full Operational Capability. This leads to a central problematic for this report and thus European military interoperability in general because it points to the heart of the dilemma. Given the lessons learned from recent NATO and EU operations, one can ask whether being able to conduct advanced expeditionary warfare is the correct goal. Or, does a new balance have to be struck between European capability and capacity, whereby forced

entry is to be matched by sustainable stabilisation and reconstruction? It is worth pausing to provide the details of the NATO Response Force which was conceived as a land, sea, air joint force some 25,000 strong, comprised mainly of European high readiness forces, with an air arm able to fly up to 200 combat air sorties per day and use of NATO's naval standing force. Whilst impressive, such a force should by no means break the bank of deployable, European high readiness forces. Unfortunately, that is precisely what seems to have happened.

Indeed, both questions have profound implications for European military interoperability because they pre-suppose two very different levels of ambition, capability, force structure, technology, doctrine and thus interoperability. Certainly, European forces are still required by Headline Goal 2010 to prepare for the 'full range' of the Petersberg Tasks, including rescue and humanitarian missions, peacekeeping and the role of combat troops on peacemaking. Member states can also contribute to joint disarmament operations and security sector reform (SSR) tasks. However, if translated into what it entails to undertake the Petersberg Tasks in 2007 more robust missions are implied than originally envisaged back in 1992 when the Balkans was the fixation.

And therein lies the problem. Much of Europe is still locked in a 1990s regional peacekeeping/peacebuilding mindset, whilst the US is engaged on the systematic preparation for confronting the next systemic challenge, however incompetently. Quite simply, many of NATO's European forces are no longer truly interoperable with American forces assigned to NATO if one sticks strictly to the letter of interoperability as *the ability of systems, units or forces to provide and accept services from other systems, units or forces and to use the services so exchanged to enable them to operate effectively together*. There is a very real danger, therefore, that the emerging European gap will also induce an interoperability crisis *between* European forces, rendering both NATO and the EU inefficient as force generators and thus as crisis managers. In other words, too many Europeans seem to think that by incorporating stabilisation, crisis management at the lower end of effect and SSR they are in fact easing the need for effective military interoperability. In such light the expansion of the Petersberg Tasks is a political ruse to mask the fact that so little progress is being made in crucial high-end interoperability or effective inter-agency co-ordination.

This basic dilemma is apparent in the contrasts between the level of ambition implicit in both the EU and NATO efforts. This is particularly apparent if the Petersberg Tasks are set alongside the stated objective of NATO transformation. The latter can be summarised as a commitment to ensure transatlantic military interoperability by changing the twentieth century NATO - founded on static, reactive, regional, mass attrition and de-confliction forces built around, supply point logistics - into a force founded on agile, proactive, global effect, precision capabilities, operational coherence, integrated distribution based logistics, and NATO fused intelligence. Given that NATO Europe can still today only muster around 170,000 or so advanced expeditionary uniforms from the 1.7 million men and women that wear its various uniforms, suggests a very long way to go. Even within that figure of 170,000, performance is very patchy¹⁴.

Moreover, the NATO mission continues to demonstrate the gap between intent and effect. The Alliance states as its intent the need to create a strategic combined and joint capability with global reach through network-enabled forces operating at high levels of technical and doctrinal interoperability. Such a force would, in turn, be founded on effects-based planning

¹⁴ See Algieri F. & Lindley-French J., *A European Defence Strategy*, (Guetersloh: Bertelsmann, 2004)

underpinned by networked-enabled forces capable of global effect advanced expeditionary operations. The truth is that many of the forces that are needed to provide the force base for such ambition are locked down in Afghanistan either fighting the Taliban or running provincial reconstruction teams (PRTs). Consequently, not only are they far from being the rapier-like, networked, interoperable force envisioned by the NATO transformation model, they and their equipment are also slowly being worn down by stabilisation attrition and the exigencies of muddy and dusty boot operations. The same can be said for several of the formations that will form the EU Battlegroups. Indeed, PRTs have become the very antithesis of interoperability as they emphasise forces only operating in their own zones within theatre.

Former Supreme Allied Commander, Transformation (SACT) Admiral Ed Giambastiani said, “Transformation is a continuing process, not a destination”. As currently envisioned it is in danger of becoming a nirvana. And that is the essential point if military interoperability is to generate the kind of efficient and effective ‘trade’ between allies and partners that the generation of military effect in complex operations demands these days. Put simply, US-led transformation intimidates too many Europeans into virtual paralysis. The real challenge for them is rather how best to maximise modernisation in an uncertain strategic and financial environment in which the only certainty is that both are deteriorating. In other words, the dilemma concerns how to spend not very much, while coping with a very great deal.

Military interoperability is as much an intellectual and policy problem as a technical or organisational challenge. Indeed, transformation and interoperability are inherently and indelibly linked because interoperability is fundamental to planned, coherent and convergent force modernisation given that it can only work between forces at a similar level of capability and capacity. Given the gap between US and European forces it is therefore logical to suggest that if the gap continues to grow, would it make more sense for such interoperability to be engineered at a purely European level, rather than a Euro-Atlantic level? Indeed, it might make far more sense for the US to concentrate on fostering co-operability with its European partners at a far lower level of joint force effect, at least with the weaker partners.

This is precisely because the technology-led approach of the US is forcing smaller allies to either purchase expensive equipment they can rarely use simply to maintain the façade of pseudo-interoperability for the sake of political expediency. Upon what to spend is an acute dilemma for many of the smaller Europeans because the sheer scale and nature of the US technological transformation also transforms US doctrine and thus makes interoperability ever more unrealistic. In other words: however hard most Europeans swim to try and keep up, they can never swim fast enough because they lack the critical mass of defence investment. Consequently, sooner rather than later they will be condemned to sink in military interoperability terms if interoperability with the US is the benchmark. The most that might be hoped for is a ‘plug and play’ architecture that is basic and simple – although robust enough under fire - but which in reality prevents anything more than defensive operations or the most simple of manoeuvres.

That said; if Europeans are themselves to promote effective military interoperability then even at the European level a mindset change is required. Make no mistake, transformation/modernisation and interoperability must necessarily reach into every aspect of trans-national military ‘jointness’ (it requires more than ‘combinedness’). Far greater synergy would be required at all levels of interoperability: organisation, policy, doctrine, process, training and education. Allied Command Transformation is a case in point.

The structure of Allied Command Transformation (ACT) emphasises the extent of reform that effective European military interoperability would demand. ACT has five key divisions covering: strategic concepts, policy & interoperability (note the linkage between concept, policy and interoperability reinforcing a military truism that the latter is far more than some military-technical fix); defence planning; future capabilities; research and technology; joint education & training and joint experimentation, exercises & assessment.

Furthermore, ACT's standing priorities reflect those of the EU, albeit at a greater level of implied ambition and demonstrate the demands that networked interoperability imposes today. Such priorities can be best summarised as transforming NATO's military capabilities to be better able to prepare, support and sustain Alliance operations. Consequently, deployability is vital if the implementation of the force concept inherent in the NATO Response Force and other deployable capabilities is to be realised through the maintenance of full operational capability and the transformation of partner capabilities. Again, to achieve what is after all a relatively modest goal of deploying a 25,000-strong expeditionary force, NATO's military interoperability goals are challenging. It is worth noting that given the complex structure of the EU Battlegroups such interoperability will be at least as difficult to achieve for such formations if such a force is to fulfil the full range of Petersberg Tasks in 2008 and beyond.

First, NATO must promote advanced interoperability between land, sea, air and Special Forces into a single operational package (joint) through de-confliction. NATO possesses some 250 combat brigades, most of which are still little more than adapted main defence forces. In other words, these are forces that have seen little modernisation (let alone transformation) since the end of the Cold War. There are some 69 US brigades, with only an additional 80 from the rest of the Alliance, truly deployable (most of which are deployed). To reiterate, force rotation demands that two brigades must be in reserve for every one deployed. However, only 15-17 European brigades are deployable at any one time. In light of this, it is hardly surprising that so few Europeans want to come to the aid of their hard-pressed allies in southern Afghanistan, and to place such restrictive caveats on rules of engagement. The plain fact is that most Europeans can only undertake territorial defence or limited rules of engagement (ROEs) in peacekeeping operations (PKOs) due to conscript-legacy capacity, static capabilities, and limited doctrine (the way militaries go about their business) that makes effective interoperability between national forces hard to achieve beyond the collective fulfilment of a basic military task-list.

Second, co-ordinating advanced military interoperability between national forces, i.e. generating so-called combined effect is a must. However, as both Afghanistan and Iraq have demonstrated such operations are far more than Bosnia or Kosovo-plus. Indeed, it is likely that Kosovo was NATO's last and only solely military operation. By its very nature most EU operations will be complex civil-military affairs (Comprehensive Approach). Mission success will thus require effective means and instruments for interoperability with national civilian ministries, partner international institutions and key non-governmental organisations (NGOs).

Third, the integration of capabilities through the NRF was always seen as its *prima facie* mission. Equally, the same task will befall the Battlegroups. To be meaningful they cannot simply be 'paper' or 'standing forces' in isolation from each other. They must also be vehicles for European force modernisation.

Therefore, meaningful twenty-first century European military interoperability will require two important elements. First, a European Force Modernisation Concept which uses advanced interoperability concepts and architecture to promote advanced forces. A basic interoperability mechanism could suffice for a short time but given the pace and scope of negative change in the world, such ‘interoperability-lite’ would not work for long. Second, the creation of a European military interoperability hub that is distinct from both NATO and the US. However, the creation of such strategic architecture begs a question. To what extent do Europeans wish to invest in network-centric warfare (network-enabling is simply a lower-level fix), with its systems-of-systems, space-based and air-breathing sensors, and precision guided munitions? Evidence would suggest not very much. Consequently, the very real danger exists that European military interoperability could lead to de-coupling from the Americans with little of relevant or meaningful military utility to put in its place. Make no mistake, if Europeans want to promote European military interoperability it cannot be as a lowest common denominator alternative to US leadership.

Fourth, and following on from the above, the NRF was always envisaged as a vehicle for the development of effects-based, collaborative, network-enabled and interdependent forces founded on intense interoperability. Again, if the Battlegroups are to lead to a modular European force structure that is organic and could develop into an expandable, adaptable robust capability tailored to any given scenario post-2010 they will need to be seen as such a vehicle. The suspicion is that many of the Battlegroups involving the smaller powers incorporate no such vision or ambition and could thus rapidly become obsolete, reinforcing profound interoperability problems even between Battlegroups.

Finally, because there is no policy or plan that directly address or measures interoperability between Battlegroups the bliss of ignorance seems to be the order of the day. What is needed is an established institutionalised mechanism for the analysis and assessment of interoperability between Battlegroups founded on an agreed set of metrics. Indeed, without the confidence of robust lessons-learned exercises from the early use of Battlegroups it is hard to believe they will become Europe’s preferred formation of choice.

Chapter Three

3. The Current Interoperability Debate

The creation of a European military interoperability hub will require the construction of a command hub a European Permanent Joint Headquarters (EUPJHQ). Ever since the MILEX 2005 exercise it is clear that France and Germany will in time build on the 2003 Tervuren proposals to create such a hub. Indeed, such a concept is implicit in the so-called Naples Agreement of November 2003, between the UK, France and Germany: an agreement that paved the way for the creation of the Battlegroups. Of course, without Europe’s strongest military power, the UK, the danger is that such a hub will be still-born. It is vital, therefore, to reach a new consensus over the future of effective European military interoperability. The Battlegroups could help forge such a consensus because they represent a new approach to force packaging that – while reflective of new thinking about the planning and conduct of operations – is compatible with NATO. The traditional concept of force surging and force sustenance is implicit in the SHAPE model being reinforced by the modular force concept implicit in the EU model. Certainly, the natural evolution of ESDP post-2010 demands the

creation of an autonomous EU Permanent Joint Headquarters (EUPJHQ). This will need to emerge in the new Headline Goal document that will replace HG 2010, which will be similar in scope and ambition to the UK's Permanent Joint Headquarters (PJHQ) or the French Centre de Planification et de Conduite des Opérations (CPCO), with an ability to conduct complex inter-agency operations.

Indeed, such a headquarters is the logical evolution of the Berlin-plus process whereby the EU gains access to NATO assets and capabilities. The EU already has a cell at SHAPE to improve preparation for EU operations using NATO assets together with an EU Force Headquarters (EUFHQ) serving Operation Concordia in Macedonia through the Berlin Plus process. Much of the debate today is about how best to enhance that system. It would make perfect sense for SHAPE to actively support an EUPJHQ as an integral part of promoting better European military interoperability given the complex manner by which Battlegroups must be generated and sustained. Indeed, at the very least the generation of effect on the ground in complex contingencies will demand better EU-NATO liaison, a more permanent and transparent link between the EU Military Staff (EUMS) and NATO, and a beefing up of the civil-military cell in EUMS to further enhance early warning, situation assessment, strategic planning and ultimately operational planning, command and control.

In an ideal world, the EU would bring all those engaged on such operations under a single Strategic Directorate that combined all Council and Commission security efforts. The status of civilian ESDP missions is still unclear and, whilst a degree of authority may be transferred to the Council under the Reform Treaty, without an EU Comprehensive Approach the chances for competition between the Council and Commission remain. This will inevitably lead to problems of interoperability between the military and civilian aspects of future ESDP operations. Put simply, for all the debate about the Solidarity Clause, and Permanent Structured Co-operation and the genuine power of new EU High Representative of the Union for Foreign Affairs and Security Policy to combine the efforts of the Council and the Commission, there is still a long way to go before the civil-military relationship within the EU could be said to represent a real single institutional framework. Moreover the relationship with the member states in this area remains complicated and unclear. That said, an EU Permanent Joint Headquarters would be different to SHAPE because it would help to generate broader interoperability given the likely civil-military nature of most EU-led operations.

Furthermore, an implicit division of labour between NATO and the EU based on regional criteria can no longer be denied. Indeed, the benefit of a distinct European planning and command capability is that it affords the West more political options when dealing with complex contingencies in places such as Africa. Today, those options are too limited. Europeans can act in three ways, through NATO operations, an EU-led operation through Berlin plus arrangements (which, for all its on paper benefits is proving cumbersome because of political barriers generated by Turkey, Cyprus and others) or through autonomous national action with one of the bigger powers acting as a lead or framework nation. Given the political problems associated with the EU gaining access to NATO assets on a systematic basis two other options are open. Either the bigger powers simply step outside the institutional framework and bolt together coalitions of the willing and able, which will not only limit but likely damage effective European military interoperability, or the EU itself develops the necessary capacities and capabilities to act as a coalition leader.

Furthermore, the very nature of the Battlegroup plan strongly reinforces the need for European military interoperability. Indeed, it must not be forgotten that Battlegroups were designed to improve European capacity for rapid reaction. Thus, they are meant to be robust force packages requiring strong and active planning, command and control ill-suited to an *ad hoc* approach. Moreover, the range of missions implicit in today's Petersberg Tasks demands that the Battlegroups do indeed live up to their promise to be deployable within five to ten days, able to undertake high intensity operations and to act as a stand alone or initial entry forces for larger operations.

Make no mistake, if the Battlegroups are watered down or fail then the damage to the credibility of ESDP, even the EU will have been dealt the most damning of blows. That is why implicit in the Battlegroup process is European military interoperability at the high-end of effect. This is leading to some interesting shifts in traditional positions. The Nordic Battlegroup will be in theory at least capable of engaging the full range of Petersberg Tasks. That is why the Swedes have insisted that the Irish component adopt NATO Standards - indicative of an improved mindset over the use of force and interoperability. Indeed, the fact that the Irish have adopted NATO Standards represents a major shift on the part of the Irish Republic over its traditionally firm view of neutrality. Too many member states are 'talking but not walking' vis-à-vis Battlegroups. This explains why the British are dangerously close to effectively contracting out of ESDP. ESDP can afford no more security pretence.

Today, three tiers of Battlegroup exist implying different levels of military fighting power, effectiveness and interoperability. Battlegroups formed by one nation acting alone are clearly likely to be the most robust especially those formed by states such as the UK and France with a strong expeditionary tradition and which inevitably will carry out initial or forced entry operations. For these Battlegroups interoperability is less a problem than the need for real and effective 'jointness', and finding partner formations that can consolidate any gains made. However, if the force is to be expanded or for purposes of effective rotation effective, interoperability remains vital and the absence of a detailed debate about interoperability is precisely that – conspicuous by its absence. As one commentator points out, "While most planners recognise that an EU BG needs a strategic reserve force to provide it with back-up in case of need there is no formal reserve force requirement"¹⁵. Such a weakness is all too telling.

Effective interoperability is thus a *sine qua non* of success. Paradoxically, Battlegroups made of a multinational cocktail demand a very high degree of effective interoperability. Indeed, for multinational Battlegroups such interoperability will provide the litmus test of success or failure for it is hard to believe that without a complex ability to accept and afford services under pressure such Battlegroups can be anything more than a political statement of intent. Moreover, effective interoperability requires a significant degree of preparedness, working together at staff level and training. Therefore, such forces cannot be said to exist if interoperability has not been worked up. It is therefore vital that NATO standards for force certification remain the gold standard for declaring a force at full operating capability (FOC). There is no need, nor is there any point in inventing alternative scales of measurement. If permanent structured co-operation is generated meaningful progress the use of such standards must be central.

¹⁵ Lindstrom, Gustav, 'Enter the Battlegroup', *Chaillot Paper*, no. 97, 2007, (Paris: EUISS) p. 53.

Interestingly, some EU member states are pushing for Battlegroups - which are essentially land-focused forces - to have proper and assured access to sea and air forces. Such a capability again emphasises the need for both effective jointness and combinedness. For example, the most demanding missions foreseen for a Battlegroup within the framework of the Petersberg Tasks would require a fully elaborated air component of at least two to three squadrons of combat aircraft with a three-to-two ratio for support aircraft. The European Rapid Reaction Force (ERRF) at full corps strength envisaged a total of six hundred combat and support aircraft and a fully elaborated naval/amphibious force in and beyond the Littoral incorporating two aircraft carriers, eight amphibious assault ships, six submarines, twenty principle service craft, one command platform, four support ships and ten maritime patrol aircraft.

Europe today can certainly provide such a force but its effectiveness and sustainability must be seriously questioned. Moreover, such a force at any strategic distance from Europe would need to rely almost exclusively on American 'eyes' and 'ears' as Europe lacks such force enablers and force multipliers. The conduct of such advanced expeditionary operations by such a force would also require interoperability of the highest order. This is because there is another truism that such operations are subject to: the further away from the home base, the more the coalition members, the more intense the operation and the longer the time required the more effective and intense the interoperability required. Simply muddling through would be a recipe for disaster.

Such realities are sobering given the EU's stated need for operational concurrency, operational flexibility and operational tempo. The aim is that a full Battlegroup operational capability would permit the EU to undertake two concurrent, single Battlegroup sized rapid response operations (including launching two operations almost simultaneously). To that end, at least two Battlegroups must always be at high readiness, which is no mean feat given the other demands on forces.

Nine Battlegroups could sustain two battle groups at high readiness at an acceptable level of operational tempo (optempo), whilst enabling the forces answerable to such Battlegroups to be used for other purposes, such as the NATO Response Force or, indeed, national missions. Twelve Battlegroups at full operational capability should in theory at least permit three Battlegroups at high readiness. However, here is the rub; there is little or no way to understand the quality or capability of many of the Battlegroups until they are actually in contact with danger. Recent experience in Afghanistan suggests not only that solidarity too often collapses on point of contact with danger but that the quality of forces and their approach to the tasks assigned to them is diverging, mainly as a function of capability disparities. The experience of the provincial reconstruction teams (PRTs) suggests a dangerous gap in force and operational concepts between Europeans that extends to both specialised and special forces. Such basic imbalances must be addressed as a matter of urgency if the Battlegroup concept is to have any traction in the real world.

It will not be easy. Put simply, there are three types of forces in Europe today. Only Britain and France can be said to possess a truly advanced expeditionary warfare capability, albeit constrained by limited size and sustainability. The Germans, Dutch, Italians, Poles, Spanish and Swedes all possess excellent units but, by and large, must be characterised as peacekeeping forces with the other EU member states able to offer one or two good units but little more in terms of projectable forces. Effective military interoperability can achieve a lot but without a shared strategic and force concept it cannot achieve miracles.

Furthermore, the Battlegroup force generation process will need to be reliable and trustworthy and given the profound and dangerous splits over what might best be termed rules of non-engagement in Afghanistan and the less than impressive force generation for the mission to Chad and the Central African Republic (CAR) there is little trust in such a system at present. This is vital because force generation and military interoperability are two sides of the same planning coin. Indeed, the very forces so generated are on the basis that they can work together (and with others) given any scenario. Battlegroup force generation will require rapidly deployable force packages made available by EU member states, together with pre-identified deployment, support, logistics assets and command and control structures. If it is unclear which nations are going to participate until the last minute, which is too often the case, or that a state might decide mid-operation to withdraw a sovereign asset, how can such a largely voluntary system be relied upon?

Given the chronic military weakness of at least 18 of the 27 EU member states it has been suggested that such states focus on specialised or niche capabilities. However, the bigger powers will be understandably reluctant if such a capability is in effect a show-stopper. Again, the devil is in the force planning and military interoperability detail. Whilst a clearing house approach to force generation suggests that a co-ordinated pool of force packages can be tailored to meet specific contingencies, the harsh reality of recent lessons-learned suggests otherwise, particularly as the force should reach readiness in five to ten days. .

3.1 The EU Audit Trail

There have been some genuine successes, but nothing on a scale that could be called robust. Operation Concordia in the Former Yugoslav Republic of Macedonia in March 2003 involved 350 military personnel drawn from all EU member states, except Ireland and Denmark, with France performing the role as framework nation. Operation Artemis in the Democratic Republic of Congo, again with France playing the leading role, involved some 1,800 personnel, involving 15 member states with Special Forces being provided by the Swedes and intelligence by the UK with support from Germany and others in Bunia. However, 90 per cent of the force was French with France providing the operational headquarters (OHQ) and force headquarters (FHQ), which had been 'multinationalised' by 80 officers from 14 of France's EU partners. Put simply, it is difficult to be sure that such a system of 'ad hoc plus' can work for anything but the most limited of operations. For anything more robust, as foreseen in Headline Goal 2010, far stronger force and operational planning systems will need to be put in place.

Operation Althea, which started in Bosnia-Herzegovina in December 2004, was a far larger force involving some 7,000 personnel, but only because the situation on the ground was far more benign and NATO already had headquarters and logistics assets *in situ*. As such, Major-General David Leakey, NATO's British Deputy Supreme Allied Commander, Europe (DSACEUR) was appointed EU Operation Commander with his OHQ being essentially the same as NATO's existing headquarters, which was simply 're-hatted'.

Chapter Four

4. October 2007 – The Afghanistan Case Study

In October 2007 one of the authors of this report (Julian Lindley-French) visited Afghanistan to discuss *inter alia* military interoperability within the International Security Assistance Force (ISAF). Comprised of 18 European countries engaged on a complex civil-military operation ISAF is in certain very important respects a role model for future European operations founded on the Comprehensive Approach. Meetings took place with US General McNeil (COM ISAF) in Kabul together with other senior commanders at ISAF HQ. Visits were also made to Regional Command South in Kandahar which controls operations in the volatile south of the country and to Forward Operating Base Lagman near Qalat to join the US Army on a first contact mission deep in the Pashtun homeland.

The lessons for European military interoperability were sobering. Because of national caveats European forces in the north have little or nothing to do with Regional Command South. Indeed, such is the lack of contact that no direct flights take place between Kandahar and Regional Command North and Regional Command West. As a result, a new grouping is emerging comprised of European forces in the south mainly focused on the British and Dutch, but also comprising the Danes, the Australians, Canadians and Romanians, alongside the Americans. In light of the experience of working together they are forging a new counter-insurgency doctrine for which the non-participating Europeans in the north are effectively excluded.

However, effective interoperability is by no means always the case even within this group. For example, each country has taken responsibility for a Provisional Reconstruction Team (PRT). The British are running operations in Helmand province with the Danes and Estonians in support and the Dutch in Uruzgan with the Romanians supporting the Americans in Zabul. Each PRT represents a single operating area in which the lead nation effectively imposes its doctrine. The British rules of engagement are different to the Dutch, for national legal reasons founded on the British need to respond to any attack with proportionate force. Such imbalances lead to the differing use of armed force by the two countries in their respective PRTs. The harmonisation of such legal questions will be vital to effective interoperability because ultimately rules of engagement and military culture shape force and operational planning as much as the dictates of the mission.

Moreover, because the Comprehensive Approach is pursued in different ways by different European countries the civil-military balance tends to contrast with each having a more or less different 'doctrine', partly because of external doctrines imposed upon armed forces by national civilian ministries. Such tensions in both doctrine and approach to operations are being reduced through the creation of so-called OMLT's (Omelettes) i.e. Operations, Mentoring and Leadership Teams that are spreading out across the south to prepare the Afghan National Army (ANA) and Afghan National Police (ANP) (POMLTs) to progressively take the security lead. However, even here discrepancies are apparent. The training given by the French to officers at the Kabul Military Training Centre (KMTC) in Kabul varies from that of the Americans in charge of NCOs and the Canadians, British and Dutch when the Afghan battalions, the so-called KANDAKs go south to begin operational training. This situation not only leads to confusion on the part of the Afghans, but also reveals the extent of military doctrinal differences between the Europeans. It is this basic

way of doing military business that will need to be harmonised as a first step on the road to effective military interoperability.

Differences in doctrine are reinforced by the differences in technology which is not just a US-European division. The gap in defence spending, particularly on equipment budgets, is really beginning to show in the different approaches to the use of technology. All Europeans lack sufficient helicopters, which has forced the Americans to maintain a 'bridging force' of tiring machines that will have to be withdrawn at the end of January 2008. However, with the British using increasingly sophisticated network-enabled systems, supported by drones, precision-guided munitions and counter-fire systems it is becoming ever more difficult for other Europeans to operate alongside them. The only area that seems to reflect some progress concerns Special Forces. However, because they operate usually in very small force packages they can normally be kept separate even within an operation, which was demonstrated during the rescue of Italian personnel by British and Italian Special Forces in September 2007. Thus, what works is co-operability rather than interoperability. The fact that the British had to play such a prominent role in what should have been an Italian operation speaks volumes about the gaps in both capabilities and capacities. It is a gap that is also becoming apparent in Afghanistan between those that possess heavy air-lift assets and those that do not, with a particular premium being placed on C-17 aircraft.

However, perhaps the issue of most concern to effective European military interoperability is the logistics system. Each country has its own logistics train going back to its national home base. Consequently, each country carries equipment for its own armed forces using different means into separate logistics centres for national re-supply. Effective European military interoperability is dependent upon the tail end of the 'teeth to tail' ratio. In an ideal world, there would be one NATO/EU logistics system whereby all equipment and materiel was on a central database. It would then be shipped into theatre using a centralised system for the management of such movements with a Logistics Command ensuring that all forces so engaged were supplied and re-supplied in an efficient and rapid manner. Under such a system where forces had a surplus of one item it could be transferred to those suffering deficiencies and supported by a system of common accounting and common funding that is no less important to effective interoperability than combined and joint doctrine, planning and force and operational concepts. Unfortunately, there are simply too many different structures, weapons systems and equipment to render such a system feasible at present.

Consequently, coalition forces in the south lack real manoeuvre beyond the area covered by the PRT. Moreover, with several Europeans either sending only the smallest of forces or refusing to permit forces to be used on combat missions in the south there is little or no NATO Strategic Reserve that could move rapidly to support particular forces under pressure. Consequently, European forces engaged in the south are only able to cover relatively small areas of their responsibility which enables the Taliban to enjoy tactical superiority on occasions even if they are massively inferior technologically. Certainly, the very real bad feeling that such imbalances have engendered will make it very difficult to build a European military interoperability model that EU member states can trust. This basic dilemma cannot be swept under a carpet however much some EU member states would like to.

In effect, the creation of the PRTs is presented as a way of ensuring smooth civil-military effect in a given area. In fact by operating in different areas such distinction masks the very real differences in the approach to, and standards of, interoperability. Indeed, such are the differences that Regional Command South (RC South) spends much time trouble-shooting

and problem-solving to turn what are disparate forces into a single military entity. In an ideal world, the high-end armed forces in the south would be separated from the PRTs and turned into a single manoeuvre force that could cover the whole of the region and through an air-mobile capability impose pressure when and where it is needed. Too often the task falls to the Americans of OEF which go about their business beyond the control of ISAF commanders.

However, perhaps the greatest challenge the Afghanistan case study highlights in forging true European military interoperability does indeed concern Special Forces. The undoubted success of some recent operations in Afghanistan has been spearheaded by the Special Force of Operation Enduring Freedom (OEF). Comprised of forces from several countries (US Delta Forces, UK Special Air Service, etc) they have embarked on an operation to damage the Taliban throughout its command chain and along its lines of communication wherever and whenever they operate. Such has been the success of this operation that when one of the authors visited the Afghan village of Moradkhan-Kalay deep in Pashtun territory, which only the month before had greeted coalition forces by throwing stones, it was evident that something had changed. Almost certainly it was the pressure on the Taliban caused by the wide-ranging mission of the Special Forces of Operation Enduring Freedom.

If Europeans are to stabilise and reconstruct - as one side of the security package, they must generate also generate the other side – which requires mastering the dark art of counter-insurgency. To do so Europeans will need to overcome the political correctness that has prevented the creation of sufficient numbers of high-end special and specialised forces. Peacekeeping in this world is at the luxury end of the business. The problem is, as Operation Enduring Freedom demonstrates, that if several such forces are ‘bolted together’ they can only ever operate in parallel, each with their own areas of operations. For true effect a single force of truly Special Forces up to British and French standards is required (not the so-called Special Forces that are in reality little more than glorified Marines) that can master counter-insurgency (COIN) doctrine.

Furthermore, the sheer workload imposed by the military task list and the need to rotate forces prevents effective training and the working up of formations. Whilst much is learnt ‘on the job’ much that has been learnt is often forgotten as personnel rotate into other posts. Moreover, each state has a different deployment time for personnel. The US PRT in the east of the country is probably the most effective because personnel stay for fifteen months. Some Europeans stay for no more than four and a half months. Consequently, key relationships are cut short thereby undermining what little chance exists to generate effective interoperability.

As with most things military the devil is in the detail. There are 37 states represented at ISAF Headquarters, 18 of which are European. The job that General McNeil and his team do to turn such a disparate grouping into a credible force is quite remarkable. However, the lack of even effective military interoperability therein reflects a profound problem that leads to a significant use of *ad hoc* approaches. The command of international military English language by much of the force is at best basic. This is particularly the case with the troops from newer EU and NATO members. Moreover, the insistence on the part of many states to have officers present has led to both ‘rank inflation’ and too many officers doing jobs NCOs would normally undertake. Worst of all, the demand of some European countries for posts means that more often than not specialist personnel find themselves engaged on tasks for which they are not trained, which imposes extra pressure down the command chain. For example, specialist British language trainers are engaged on movement protection missions

covering important (and not so important!) civilians visiting Kabul. The basic lesson of ISAF is that coalitions are ill-suited to effective interoperability, particularly when they are being eaten into by the cancer that is national caveats. National caveats whereby European states place strict limits on where and how their forces operate must end if European military interoperability is not to fail at the first hurdle.

Chapter Five

5. Technical Convergence and Capabilities Required

One aspect of technical convergence and harmonized capabilities concerns the organisation of the European defence-industrial effort in support of effective European military interoperability. Indeed, the role of the European Defence Agency (EDA) could be vital in elaborating procurement needs within the context of military interoperability. However, the political-military conditions that prevail in the EU regarding military affairs do not yet permit the EDA to play the role it was anticipated to fulfil. European defence research and development (R&D), and thus the nature and level of interoperability, must be driven by fundamental force drivers such as Europe's way of doing security and warfare, the missions and capabilities around which European forces must be designed, and, of course, the over-arching nature of European co-operation and transatlantic engagement.

Therefore, Europe's defence-industrial strategy cannot and must not be divorced from Europe's military interoperability strategy. To an extent these questions were addressed by the EDA's Long-Term Vision Paper, but in a manner that was neither sufficiently ambitious nor systematic, nor able to impact effectively on national force planning and equipment. There needs to be a far more explicit understanding of how European R&D needs to be organised, particularly as it relates to the vision of military transformation similar to that now in vogue in the US.

Certainly, Europeans cannot afford for financial, military, industrial, security of supply and/or political reasons to permit too great a dependency on US technology and C4ISTAR architecture. Moreover, R&D is fundamental to a twenty-first century European equipment programme that must itself be driven by the force and interoperability concept. In other words, for Europeans to establish a credible link between the security environment, planning and capabilities and military effect, a sound concept of military interoperability must be the main driver. To give such a linkage between strategy, interoperability and procurement a real meaning, the organising principles for a European defence-industrial strategy will need to be much more elaborated, R&D expenditure will need to be concentrated and increased together with a proper framework for more effective co-operative (and competitive) innovation and affordability.

Technical convergence and harmonized capabilities in an ESDP context, however, are a function of the understanding of the nature of modern military operations. Today the nature of these operations can be split into two groups: on the one hand - high intensity operations, that are increasingly demanding in terms of high tech systems; on the other hand - peace support/peacekeeping operations that are less demanding in terms of high tech systems but which pose others challenges in terms of interoperability, namely interagency interoperability

where coordination becomes much more difficult at the multinational level, especially when different governments might have different political objectives and indeed methods.

5.1 European Transformation

Furthermore, high intensity operations must be understood in the context of ‘transformation’, which, as mentioned, is at present the key driver for guiding the evolution of Western armed forces. In Western Europe, such a concept has already impacted, however differently, on national military establishments. In Germany, transformation has been focussed on changing the mindset in order to reshape at least part of the armed forces to make them better able to be projected beyond the European space. This is a situation totally new for the Germans, particularly for the *Heer*, and to a certain extent for the *Luftwaffe*. To some extent, such change is similar to that which happened in France with the professionalisation of the armed forces to make them fully deployable in overseas theatres. In the UK, transformation has led to an attempt to combine Network Centric Warfare (NCW) and Effects-Based Operations (EBO) within the context of transforming British forces, even if that has led to some reduction in size.

Therefore, if transformation has different meanings for different Europeans, a consensus does appear to exist over the role of information technology, which is at the heart of the effort to ensure superiority in decision-making in the battle space. Such technology is essential for observing the enemy, discovering his methods and objectives, and then directing the battle effectively against him. Technology, in many instances, is also an important factor in avoiding high civilian casualties – an unfortunate characteristic of wars of attrition. Modern war is no longer total war, aimed at annihilating the enemy. Rather, it relies more and more on precision strikes that destroy the enemy in a proportionate manner. Today’s combat uses technology to build advanced networks, sensors, munitions, modern weapons, and new logistic support structures in order to create forces attuned to military operations in the information age. However, European forces face a profound dilemma. Put simply, the cost of such advanced means tends to be out of the reach of most if not all European states even if they are essential to the success of complex military operations.

There is also general agreement among Europeans that both NCW and EBO are as much technology driven as corresponding to any actual/or and defined threat. Both approaches suffer from weaknesses. It can lead to a non-stop race as states endlessly seek superior and better technologies that may result in the exhausting of the limited financial resources available to European states. Moreover, both concepts only deal with one aspect of military operations currently undertaken by European armed forces. An examination of the 1999 Kosovo air campaign revealed that only a limited number of nations could fully engage in the complex high tech ‘loop’ involving surveillance, selection of targets and subsequent air operations.

At the beginning of the campaign in Afghanistan tactical co-operation within the Western coalition worked well: an American soldier on a horse was, as an example, able to talk to a French pilot, who had taken off from the *Charles de Gaulle* carrier for air support. Yet, apart from the US, allied forces have limited self-generated access to global situation awareness and at operational or strategic levels coalition command and control has been far from satisfactory. More than ever the US now dominates multinational operations through its effective control over the command structure of such operations. To some degree, such dominance retards the ability of coalition partners, notably EU member states, to develop the

ability to lead coalitions on their own, even if Britain and France can exercise such leadership to a certain extent. Therefore, an important goal of ESDP is to be able to lead such coalitions in an environment where the US may not always wish to be involved in the resolution of a crisis or NATO is otherwise engaged. As Afghanistan also revealed, adaptability in leadership and concept, rather than technology, was a key factor in the operation and here several Europeans do enjoy an advantage.

Therefore, interoperability in a European context should take into account such experiences. At the very least it implies that Europeans begin to plan, prepare and implement a complex architecture that would in time allow them to possess their own global strategic awareness capabilities. Such architecture could also draw on resources developed under the European Commission's Global Monitoring for Environmental Security (GMES) programme. This would require the ability to undertake a comprehensive system of crisis assessment, together with a mechanism for planning and conducting military operations. Even today Europeans are gradually, either through national or collective efforts, in the process of developing tools that will be of paramount importance to future strategic autonomy.

For example, Europeans will operate around 15 reconnaissance satellites (including dual-use systems) in the next few years as part of a spaced-based intelligence system. The development of the Galileo satellite system will provide significant benefits for the autonomy of European forces affording advances in navigation to the planning and conduct of long-range strikes. Or, to put it differently, effective joint interoperability in a European context means that the first priority should be given to the development of a military command and control architecture based on adequate technological means. Indeed, through the development of such architecture advances in horizontal interoperability (i.e. in a joint environment) and vertical interoperability (i.e. at the three level of warfare: strategic, operational and tactical) will be realised.

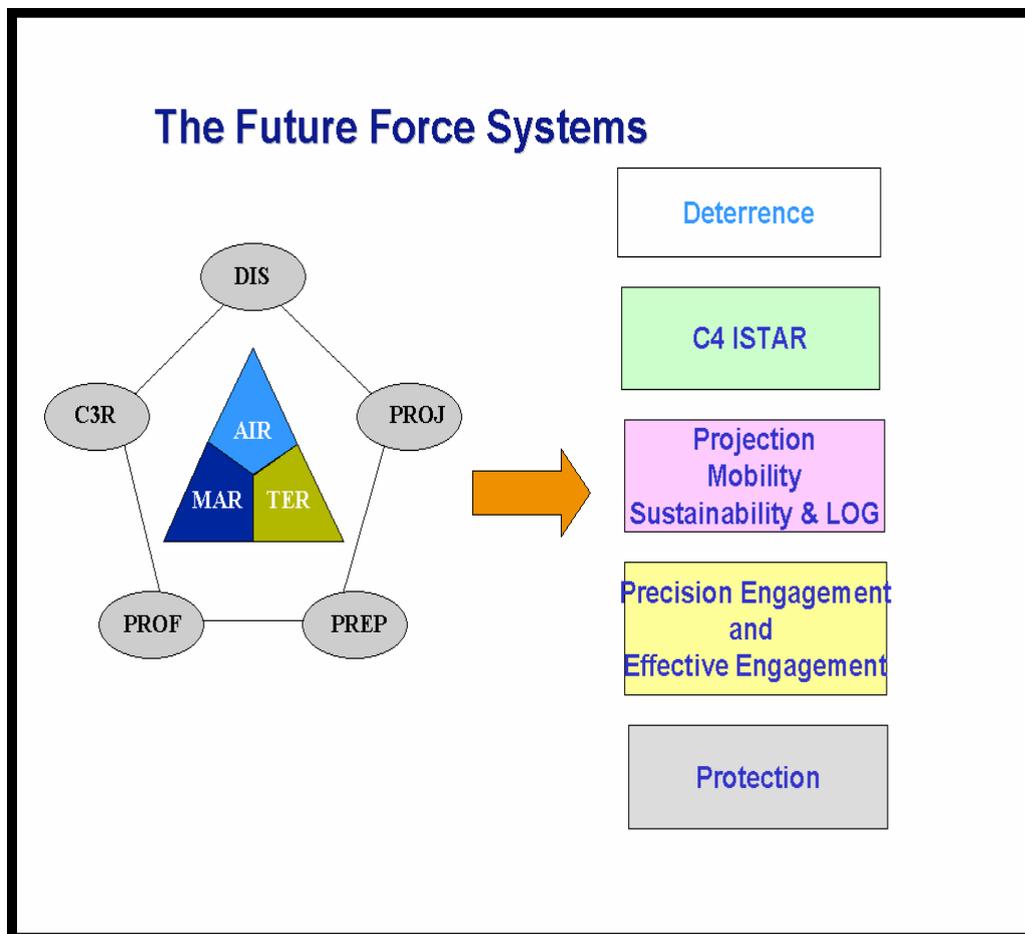
Conversely, if such measures are not realised EU member states run the very real risk of seeing the long-term military planning of equipment and material which is currently driven by national requirements preventing an effective European perspective and thus limited European interoperability. For example, long- and medium-term planning for French equipment is undertaken through the process of the so-called *Plan Prospectif à 30 ans* (PP30). Under the aegis of the French Defence Procurement Agency (DGA), with the collaboration of the General Staff (*Etat-Major des Armées*), PP30 is revised annually. Highly classified, the document indicates the medium- and long-term thrust of military R&D, as well as identifying the equipment deemed vital for the effectiveness of the armed forces. However, the development of full interoperability of French forces with their European counterparts could only be achieved if PP30 also considers directives from the EU Military Committee (EUMC).

If political agreement could be reached whereby permanent structured co-operation could be used to develop a European command structure at the strategic level, PP30 would probably adopt a different approach. Indeed, if those parts of PP30 relating to the French nuclear deterrent were removed and recognising the need to incorporate similar approaches from other Europeans, particularly the British and Germans, something like a European PP30 could be vital in promoting interoperability among European armed forces. Certainly, if such an approach was seen as merely a way for one country to attempt to control the process it would fail and could only succeed as part of a broader political agreement. This would be

particularly important for the British who would take a lot of convincing that a reformed NATO could not itself perform a similar role.

Such a long-term vision could then properly establish the role of the EDA which has yet to find its rightful place within the framework of ESDP. The EDA's role would be pivotal over the medium- to long-term for the promotion of effective European military interoperability. Indeed, its existing mission speaks to that end. Unfortunately, most EU member states are still a long way away from being committed to such a goal. From a military standpoint, if one excludes the military commitments of the Allies to Article 5 of the North Atlantic Treaty, European countries can be divided into *builders* and *consumers*. This is not a healthy situation. Indeed, if such imbalance persists, the effect on ESDP will be highly detrimental and will witness an ESDP built around a hard core of member states rather than across the membership of the EU.

Figure Seven: Future Force Systems



Consumers are those countries that have lost their ability and, indeed, their capabilities to prepare, plan and execute military operations at the operational and strategic level. Since the mid-1990s the main rationale for the restructuring of defence postures has been money, rather than strategy. As indicated in Chapter One, there are only four EU member states that spend annually more than €20bn on defence. Most of the others spend significantly less than €5bn. Consequently, they have lost a huge amount of military capability and no longer possess what can be considered balanced military structures. This is dangerous because in the field of international military security the 'menu' offered to the *consumers* is now more varied and

challenging than ever. Indeed, the diversity of international disorder requires a host of different uses of military power, ranging from peace support actions to high intensity warfare.

Paradoxically, even as their armed forces have dwindled away *Consumers* have never had so many structures with which to fulfil their security commitments. Moreover, Allied Command Europe Rapid Reaction Corps (ARRC), the European Rapid Reaction Force (ERRF), Battlegroup 1500, the Multinational Standby High Readiness Brigade (SHIRBRIG) and the NRF all reflect different political arrangements and different political masters – the EU, UN, NATO, etc. *Consumers* are thus offered *à la carte* participation to new *à la carte* military forces. Nevertheless, while they can show the flag, since they often lack sufficient troops to replace their deployed forces once their tour of duty ends, they are unable to guarantee sustaining their commitments and maintaining their participation over the duration of an operation. Consequently, the interoperability of their forces covers only one aspect of a military operation.

In fact, such structures and the political commitment they suggest masks basic military inadequacy and political weakness over the future process and end-state of ESDP. Indeed, if most EU member states are *consumers* of security and defence, the EU is also a *consumer*. As mentioned in a range of treaties since Maastricht in 1991 the EU aspires to drive towards a common defence. To that end, and in spite of its vagueness, the European Security Strategy (ESS) presented by Javier Solana in December 2003, represents a very positive move. However, as demonstrated by the case of PP30 the ESS has had little or no influence over the military machinery of individual EU member-states.

The *builders* are essentially France and Britain, supported, to a lesser extent, by Germany and Italy. These countries try hard to adapt their armed forces to a very rapidly changing environment while maintaining the ability to operate at the operational and strategic level of warfare. Unfortunately, they have very different goals in mind. Britain and France aim to maintain their status as key players at the United Nations Security Council (UNSC), as well as remain as nuclear powers. All four powers have pretensions to act as a lead nation of EU-led military operations, even though Britain and France are the only states that can be said to have a meaningful capability in this regard. The paradox is that the current situation simultaneously complicates both the development of synergies and rapprochement between the four and of their ability to act as the driving force behind the further development of ESDP.

Whatever their respective motives, the *builders* are all acutely aware of the rapid transformation of the US way of warfare. They see the shift that has taken place in Washington regarding the nature of military alliances at the beginning of the 21st century. This shift occurred when the US became even more inclined only to lead military coalitions alongside potent and interoperable partners at the operational and strategic level of warfare. Given that such a shift shows no real signs of abating, in spite of the lessons learned from the Iraq and Afghanistan operations, all Europeans must confront certain realities. First, there will need to be a greater division within the EU over the future development of new military concepts and planning mechanisms. Any European security and defence policy must necessarily be grounded on state-of-the-art concepts and planning. Retaining the ability to co-operate and ‘interoperate’ with the US is essential and indispensable for working up new military concepts and doctrine. The need is pressing because the rapidity with which Washington is moving ahead compels the *builders* either to maintain the pace or risk being ever less able to influence the US over the development and leadership of coalition

operations. Make no mistake, military co-operation and integration in the EU will have to confront these challenges.

5.2 New Approaches to Military Co-operation

Solutions to this dilemma are unlikely to be found through 'traditional' military co-operation. Co-operation must now be qualitative and substantive rather than quantitative or cosmetic. As such, co-operation can no longer be confined solely to architectural issues, as it must reflect contemporary strategic and military reality. Like it or not, the process will be very painful in both political and military terms, although with the potential for much reward downstream. Small and medium-sized EU countries will have to accept that certain states will need to lead the process. Indeed, with the deepening of ESDP, particularly as it concerns the building up of relevant mechanisms and structures for the planning and conduct of military operations, such EU members will in time regain access to the higher levels of warfare and become far more closely involved in the decision-making process. For them, in time, interoperability could well become subsumed by a process of military integration.

Furthermore, in addition to high-intensity operations, Europeans must also consider interoperability in the context of peace support/peacekeeping operations (PSO/PKO). Such operations imply the complex interaction of 'military hard' and 'civilian soft' power. This requires engagement with a wide range of actors in new theatres of operation for a number of European forces. Who would have thought at the beginning of 2000 that the EU would be involved in several military operations in the heart of Africa? Who would have imagined that more than 15 countries would be involved in Operation Artemis in the Democratic Republic of Congo (DRC), including non-EU members such as Brazil and South Africa? Who could have imagined that Swedish Special Forces would operate with their French counterparts supported by South African helicopters? Such new realities illustrate the difficulty of implementing low-intensity coalition operations in an operational environment where interoperability is far from being guaranteed.

Then there are further questions. How to address equipment interoperability? Who sets the standards? How to make rules of engagement 'compatible' with national caveats? How to create doctrinal interoperability? Answers to these vital questions are not merely technical. They are about training and sharing. Training to convince the forces engaged of their credibility as a security tool, to implement common standards of interoperability, and to build common doctrine. Sharing, or more precisely being ready to share, all types of equipment with other coalition partners who are not only traditional European or US forces but also others, such as the forces of African countries.

Whilst training and sharing should be sought at the tactical level, it is more important that such an approach is pursued at all levels of the chain of command. The success of peace support/peacekeeping operations implies that Europeans must be able to share technology with other partners if they are to create the full interoperability vital to the success of any given operation. In such a context, interoperability must also generate efficient and effective inter-agency co-operation with multiple partners and multiple instruments of action. At present, the EU is not focused on creating the necessary capabilities for successful stabilisation and reconstruction missions. Equally, several EU member states, such as France, Italy, the Netherlands and Spain, have good national para-military forces that can be used for constabulary missions and that are capable of being fully interoperable, at least in terms of establishing common rules of engagement. Moreover, there are multiple other

stabilisation and reconstruction endeavours where the EU has the potential to make a major contribution to mission success. For example, the EU could better harness its civilian agencies, and those of its member states, to perform important security functions that lie outside the realm of defence preparedness. The EU could usefully look to develop fully interoperable civilian assets for security and reconstruction missions, defence and security sector development, counter-terrorism, and counter-organised crime missions.

The concrete result of any real attempt by the Europeans to address, in depth, the question of interoperability would necessarily lead to the definition of common operational concepts based on a common structure of command. The US offers a good example of how to generate such a process with its Joint Vision documents 2010/2020 (JV 2010 & JV 2020). JV 2010/2020 are based on the assumption that its operational concepts “*dominant manoeuvre, precision engagement, focused logistics, and full-dimensional protection*” when married to its two strategic enablers “*technological innovation and information superiority*”¹⁶ would allow the US to win quickly across the entire range of military operations and in the process solve interoperability challenges between the four US military services. For the Europeans, such interoperability would mean defining criteria by which they understand and agree the scope and requirements of high-intensity operations and by so doing identify the conditions and degree of interoperability required to implement complex tasks. It would also mean in the framework of peace support/peacekeeping operations the possession of capabilities that can inter-connect their forces with those of other countries outside Europe. In such circumstance, European forces will have to be interoperable not only with each other but also with forces that may be less high-tech without putting all the forces in any given coalition in excessive danger.

5.3 Organising the European Defence and Technological Industrial Base

The achievement of such a level of complex broad interoperability must necessarily concern the shape and organisation of the European defence-industrial effort in support of effective European military interoperability. Indeed, as indicated above, the role of the EDA should be vital in elaborating procurement needs within the context of effective military interoperability. However, what Europe lacks is a true defence-industrial strategy driven by the dictates of desired value for money, military effect and interoperability. Part of this is due to the lack of political consensus over force configuration and strategy discussed above. Nevertheless, there is some progress. The Reform Treaty does at least create the legal basis for improvement by explicitly referring to the need for a European Defence, Technological and Industrial Base (EDTIB) and the role of the EDA and permanent structured co-operation in enhancing capabilities. However, there is still much to be done if such aspirations are to be turned into reality.

To that end, Europeans will need to return to first principles and basic assumptions. Make no mistake, European defence research and development (R&D), and thus the nature and level of interoperability, must be driven by fundamental force drivers such as Europe’s way of doing security and warfare, the missions and capabilities around which European forces must be designed, and, of course, the over-arching nature of European co-operation and transatlantic engagement.

¹⁶ J7 Joint Experimentation, Transformation, and Concepts Division (JETCD), available at: <http://www.dtic.mil/futurejointwarfare/>

Therefore, Europe's defence-industrial strategy cannot be divorced from Europe's military strategy or indeed planning and thinking about interoperability. Consequently, there needs to be a far more explicit understanding of how European R&D should be organised, particularly as it relates to the changing vision of military transformation now in vogue in the US. Certainly, Europeans cannot afford for financial, military, industrial, security of supply and/or political reasons to permit too great a dependency on US technology and C4ISR architecture.

Equally, the so-called 'fortress Europe' model is unpalatable and, indeed, impracticable, not least due to the very nature of cross-ownership, partnership and project management across the Atlantic. However, too often US-led projects by their very nature overwhelmingly emphasise the needs of US forces, with European considerations at best marginal: the F-35 Lightning II project and the trouble between London and Washington over so-called operational sovereignty being a case in point. Given the emerging and contrasting European forces and operational concept the need for a distinctive EDTIB is paramount because only such a base can support planning.

Research and Development, therefore, is fundamental to a twenty-first century European equipment programme that must itself be driven by the force and interoperability concept. In other words, for Europeans to establish a credible link between the security environment, planning and capabilities and military effect, a sound concept of military interoperability must be one of the main drivers. To give such a linkage between strategy, interoperability and procurement real meaning: first - the organising principles for a European defence-industrial strategy will need to be much more elaborated; second - R&D expenditure will need to be concentrated and increased; third - a proper framework should be established for more effective co-operative (and competitive) innovation and affordability.

That will require a far more integrated plan, with Europeans committed to examining as a whole the means and methods to squeeze far more out of their budgets than they do today. Moreover, they will also have to decide as a group to what degree they want to rely on the Americans for their equipment. In a significant number of cases involving platforms the use of relatively cheap American platforms should not be rejected. The massive superiority of the American C-17 aircraft over the European A-400m is a case in point. To procure over-priced, underperforming aircraft simply to keep the defence industries of certain European countries in business is no reason to enter into such programmes. Moreover, buying into the American architecture through the purchase of key enablers will help maintain a level of interoperability that all Europeans regard as essential. That said, when it comes to the question of the procurement of key platforms, systems and architectures vital to enabling European-led effect, security of supply will be critical to achieving effective European military interoperability. This is particularly important in areas such as signals intelligence (SIGINT), air-breathing manned and unmanned combat and intelligence gathering aerial vehicles, precision guided munitions, advanced secure communications and advanced command architectures.

The relationship between military interoperability and equipment and materiel procurement is therefore both intimate and pivotal. The EDA's role, therefore, is pivotal over the medium to long term to achieving effective European military interoperability. Its primary responsibility is to promote several areas upon which effective European military interoperability relies; defence capabilities development, armaments co-operation; the fostering of a true European

defence and industrial base and defence equipment base; and leadership in defence research and technology vital to military interoperability.

And yet the story of the EDA too often reflects the pretence of European military interoperability. Although some steps were taken to liberalise the European defence procurement market in November 2005 - hitherto exempt from EU involvement by Article 296 of the Treaty of Nice - with an annual budget of some €3m, the scope for procurement leadership by the EDA remains limited. Moreover, the two main weaknesses of the EDA i.e. a shortage of staff and no Research and Technology (R&T) budget to promote Europe-wide research, reinforces the lack of commitment many Europeans have to effective military interoperability. Indeed, it is bizarre that the security research budget of the European Commission is greater than that of the EDA. Indeed, the inadequacy of the EDA's R&T budget is a major failing given that the role of stimulating research was one of its founding principles, and that without such research effective military interoperability in the modern age can only be an aspiration.

Chapter Six

6. Effective European Military Interoperability

Given the imbalance between the supply and demand sides of contemporary security, it is a reasonable assumption that Europe as Europe will occasionally need to be able to project military power world-wide, sustain that power and use that power across the complex task-list generated by contingencies. The role of effective European military interoperability will therefore be vital. Whilst it is unlikely that European forces will achieve a level of interoperability normally associated with an advanced national force, such as that of the US, current operations in Afghanistan and recent operations in the Balkans and Africa demonstrate that much needs to be done. Equally, with the right mindset, much can be done relatively easily to improve such interoperability. Put simply, considerations of interoperability must always be part of a force and operational concept. Indeed, interoperability is always for a reason, or rather to achieve an agreed level of effect. This is particularly so for the kind of trans-national structure which European security and defence will remain for the foreseeable future. If interoperability is defined as "*the ability to operate in synergy in the execution of assigned tasks*" then the European partners are going to have to decide to what level of effect and what range of tasks such interoperability architecture must serve.

Given current planning and thinking it is apparent that at the very least European military interoperability architecture would require several components:

- A European network enabling capability that could lead to a network centric concept that permits compatible, if not integrated, European forces to 'plug and play', particularly at the level of C4ISR.
- Basic legal questions over the use of force and national caveats will also need to be resolved before a European force and operational planning culture and doctrinal concept could be established to underpin effective military interoperability. Such architecture will take time to establish, involving at least one force planning cycle of 10-15 years as European forces converge around a relatively compatible force concept.

- Special Forces would be needed as part of European advanced expeditionary coalition warfare involving coalition forces able to establish a presence and sustain stabilisation missions. Thus, effective European military interoperability could make virtue out of necessity by developing a capability at several tiers of military effect.

Such a construct would require strong political solidarity and trust in each other that is noticeably lacking at present. Again, if there is one show-stopping constraint on effective European military interoperability it is the lack of trust that now manifests itself given the events in Iraq and Afghanistan. The very real danger now exists (as witnessed by one of the authors in conversations with senior commanders in Afghanistan) that a new grouping will emerge that could cut across European planning and which would be formed either based on the Military Interoperability Council (MIC) or from the US, UK, the Netherlands, Canada and Australia – the so-called ABCA-plus.

Equally, the dictates of mission success in complex contingency operations puts the Comprehensive Approach front and centre for all future force and operational development. Thus, military interoperability is not what it used to be. The need to work with paramilitary and police bodies puts a premium on an interoperability doctrine that will demand specific attention be paid to the interoperability needs of the European Gendarmerie Force and other civilian police forces. The experience of the EU Police Mission (EUPM) to Afghanistan demonstrates the difficulty of trying to bring 160 civilian police officers into an environment that is dominated by military forces. They approach tasks and missions in a singularly contrasting manner.

6.1 Permanent Structured Co-operation: Re-kindling the Spirit of St Malo

At the Anglo-French St Malo Summit in December 1998 the UK withdrew its veto over autonomous EU operations. It was an important moment in the history of European security and defence. However, if the EU is to fulfil the ambition laid out in Headline Goal 2010 the so-called spirit of St Malo must be re-kindled. At issue will be the modalities of permanent structured co-operation and how best to proceed. Indeed, all those committed to such an approach must be welcome. At the very least Britain, France and Germany must forge a new consensus because without leadership by the big three it is difficult to believe that the force and operational architecture vital to effective military interoperability will be established. That will require the Germans to overcome the self-imposed barriers preventing a balanced approach to its security and defence posture. Indeed, in certain very important respects the German attitude and approach is the key to a credible future European security and defence effort.

From an interoperability viewpoint permanent structured co-operation must be based on the following components:

Adapting NATO Interoperability: The EU would need to examine NATO interoperability and consider to what extent it needs to be modified. Indeed, such a study could form the basis of practical co-operation between the Alliance and the Union based on the premise of operationalising the Comprehensive Approach which, far from leading to seamless interaction between civil-military actors, is in danger of becoming a bureaucratic nightmare. Indeed, such a study could also help to create new interoperability benchmarks given that the NRF focus on high-end, small, deployable forces is being questioned even by the US.

Establishing an EU Interoperability Concept: Given the very different approach to security implicit in ESDP, some level of autonomous institutional architecture could be useful to promote more effective military interoperability. As indicated above, NATO standards should remain the norm but an ESDP Standardisation Agency within the framework of the EDA could be useful, with a stronger civil-military component.

Elaborating Interoperability Benchmarks: Such benchmarks will need to be elaborated and to do so it will be necessary to go back to basics in an attempt to promote convergence between the Headline Goal and the NATO Prague Capability Commitment (PCC) processes. That will require some fundamental questions to be addressed if European forces are to become relevant to the challenges posed by the twenty-first century within both the European and Euro-Atlantic contexts. To what extent is a common European force and operational concept possible upon which to base a European military interoperability concept? What would be the force and operational planning centre of gravity between an advanced expeditionary capability and main defence forces? To what extent should Europeans strive for a two-tier force built around a small, high intensity ‘spearhead’ and stabilisation and reconstruction forces?

Establishing a Common European Security Role: It is impossible to separate the political from the military-technical on any substantive questions of European military interoperability. Therefore, if new benchmarks are to have any traction Europeans are going to have to properly address the creation of a common European security role. The whole point of military interoperability is that forces must be close enough in terms of concept, structure, roles and missions. In the absence of such synergy the best that can be hoped for is co-operability, i.e. the inefficient bolting together of very different types of forces. This issue is fundamental and the EU needs to grip this reality urgently.

Harmonising the Extent and Scope of Defence and Security Investment: Force compatibility pre-supposes a proportionate level of defence and security investment, particularly if the idea of a Comprehensive Approach is to move beyond empty rhetoric. Certainly, investment plans must converge to ensure planning and operational interoperability. It is self-evident that current levels of investment (as well as the nature and structure of investment) are nowhere near sufficiently compatible to provide the basis for such interoperability. Indeed, day-by-day the intra-European spending gap is negatively impacting on interoperability. Equipment programmes are far from compatible, with a concomitant impact on defence and military doctrines.

Creating a European Military Interoperability Culture: It is self-evident that the command language will remain international military English (IME). However, given the need to create a European security hub is US-based NATO doctrine still relevant for the European approach to security? Moreover, adaptations will need to be made to military interoperability to embrace non-military actors vital to mission success within what might best be termed European security interoperability. Such a culture of comprehensive interoperability must also be flexible enough to be open to partner states as well as traditional allies.

Creating a new Planning Continuum: One of the many constraints preventing effective European military interoperability are the many national and institutional structures and approaches that tend to build tension into both joint and combined planning. There is much duplication at the national headquarters levels and contradictory practices reinforced by the many differing teeth-to-tail ratios. Consequently, there is no consensus over command and

leadership culture, training and education. It is self-evident that the bigger powers will not pursue defence integration, thus the definition of contemporary military interoperability is some form of intense co-operation. However, if task-sharing, force specialisation and 'nicheing' are to lead to a more cost-effective approach to interoperability the smaller EU member states must consider some form of defence integration. Such an approach would not only enhance interoperability, but also make sense of their limited defence budgets, many of which make little sense given the nature of current spending. Moreover, such an approach would also help to overcome the problem of national certification processes that do so much to prevent effective interoperability at the transnational level.

Consider Current Force Packaging: Battlegroups are all very well and good but the size of fifteen hundred has as much to do with what Europeans can provide as any logical approach to force packaging. Five-thousand-strong Task Forces would certainly help accelerate more efficient European military interoperability as they would force an expansion of common planning, doctrine and interoperability cultures and approaches. Moreover, by creating larger pools of forces the levels of standardisation and certification required for humanitarian missions, non-combatant evacuation operations, peacekeeping and stabilisation missions would be more readily achievable. Moreover, a natural extension of standardisation and certification would be to progressively deepen the robustness of such a force throughout the command chain so that it can progressively undertake inter-position and stabilisation missions in robust environments¹⁷.

6.2 Effective Military Interoperability - Conclusions

For the following reasons effective military interoperability between and amongst European forces will be vital if strategic effect is to be generated from European resources.

- First, the nature and scope of change and insecurity will thrust global responsibilities on Europe. Such challenges will require both military capabilities and capacity well beyond the scope of any single European state.
- Second, the US could retrench after the experiences of Iraq and Afghanistan and Europeans must be credible security actors at least in and around Europe at all levels of civil and military effect. Thus, fulfilling the full range of Petersberg Tasks is vital.
- Third, US force planning is of a) an order of magnitude more advanced and complex than any European; and b) reliant upon technology to such an extent that a doctrine gap is opening up across the Atlantic.
- Fourth, the balance between civil and military assets will require complex management through the EU and effective civil-military interoperability, particularly at the operational level will be extremely important. Equally, the preparation and implementation of campaign plans will itself demand a new approach to interoperability given the lines of civilian operations essential to mission success.
- Finally, the flag one puts on operation will be almost as important as capabilities. A strategic ESDP will buy Europeans political options when faced with the need to

¹⁷ See Boyer Y, 'The Battle Groups: Catalyst for a European Defence Policy', Study for the European Parliament, October 2007.

tackle complex contingencies. However, the force must be credible and at the very minimum *modus operandi* and standard operating procedures (SOPs) of headquarters must be harmonised as a matter of urgency.

To prevent the need for ad hoc ‘creativity’ at the operational level and thus a marked reduction in military efficiency some form of interoperability convergence will need to take place over the medium to long term. Like it or not the need for effective European military interoperability cannot and must not be separated from broader considerations. Consequently, a Headline Goal 2020 is needed and would necessarily have to consider and drive a broad range of factors including the creation of a European strategic culture, the progressive centralisation of European force and operational planning, the progressive harmonisation of force concepts and structures, progressively centralised C4ISR arrangements and modalities, the harmonisation of doctrine, the efficient development of European equipment programmes and harmonised national programmes, the creation of common teeth-to-tail ratios, common training regimes, improved command of European military English; and common financing and accounting structures. It will not be easy. The gap between where Europeans are today and the structure such structure would generate is dangerously wide. Consequently, Europeans are about as inefficient as military actors as is possible for a group of advanced states.

The benefits of truly effective European military interoperability would be invaluable. Far greater value for money military effect and return on military-security investment would be generated. Consequently, Europeans would produce better and more balanced force and operational planning. In time it might be possible to move from an inefficient ‘plug and play’ system to more integrated structures that are founded on proper military coherence. Moreover, improved and harmonised force rotations would lead to new semi-permanent transnational combinations that believe in each other and which are credible force building blocks. Robust command, control and communications would make any European force far less vulnerable to decapitation than it is today. Better use of personnel would thus be generated through streamlined and compatible command structures, improved operational auditing and cheaper training. There would be far greater force sustainability through interoperability-led convergence and more efficient and realistic certification and standardisation and it would then be possible to harmonise legal arrangements over the use and status of forces. Finally, it would be far easier to agree focused equipment specification.

Such interoperability will not be easy to generate. Structural interoperability will necessarily require significant reforms at national level (interoperability is not co-operability). Moreover, such interoperability will not in itself overcome national caveats and could limit national room for manoeuvre. Consequently, ‘dumbing up’ will require significant investments above that planned by smaller states because more capabilities and greater capacity will be required. Improved interoperability cannot be achieved by dumbing down. Much political work will also be needed to harmonise rules of engagement, use of force agreements and the release of assets and capabilities to others. Europe has a very long way to go.

6.3 Role of the European Parliament

It is now widely recognized that the European Parliament has a right to be informed and consulted about matters relating to European Foreign and Security Policy. This would appear to be an opportune time for the interoperability of European armed forces to be raised as a

serious issue for further discussion. The Foreign Affairs Committee and its Security and Defence Subcommittee have already acknowledged the importance of interoperability in their previous hearings and reports, e.g. in its report on the implementation of the European Security Strategy in the context of the ESDP, it stressed:

*“the "strategic autonomy" inherent in the ESS, namely the ability to carry out operations within its scope independently of other actors, which requires interoperability and a more sustainable and reliable supply chain based on mutual support and assistance, avoiding duplication and suboptimal use of scarce resources at European level or between Member States...”*¹⁸

The same report also made the following observation:

*“...in multinational operations, the use of different – and often incompatible – equipment and armaments by the participating units leads to extra costs and reduced efficiency; therefore considers that the EU should promote measures to harmonise equipment and armaments with a view to optimising resources and the effectiveness of multinational operations.”*¹⁹

It is important that these prescient observations are now further developed in a wider European discussion within national parliaments as well as the European Parliament. With French President Sarkozy indicating that defence will be a major priority of his country's Presidency of the EU in the latter half of 2008, and in the context of the development of a possible European Defence White paper, there is no better time to deepen this debate. The authors offer this study as a contribution to that dialogue.

¹⁸ The implementation of the European Security Strategy in the context of the ESDP Committee on Foreign Affairs, PE 372.113, European Parliament resolution on the implementation of the European Security Strategy in the context of the ESDP (2006/2033(INI), Rapporteur Karl von Wogau, para. 13.

¹⁹ Ibid. para. 32.